

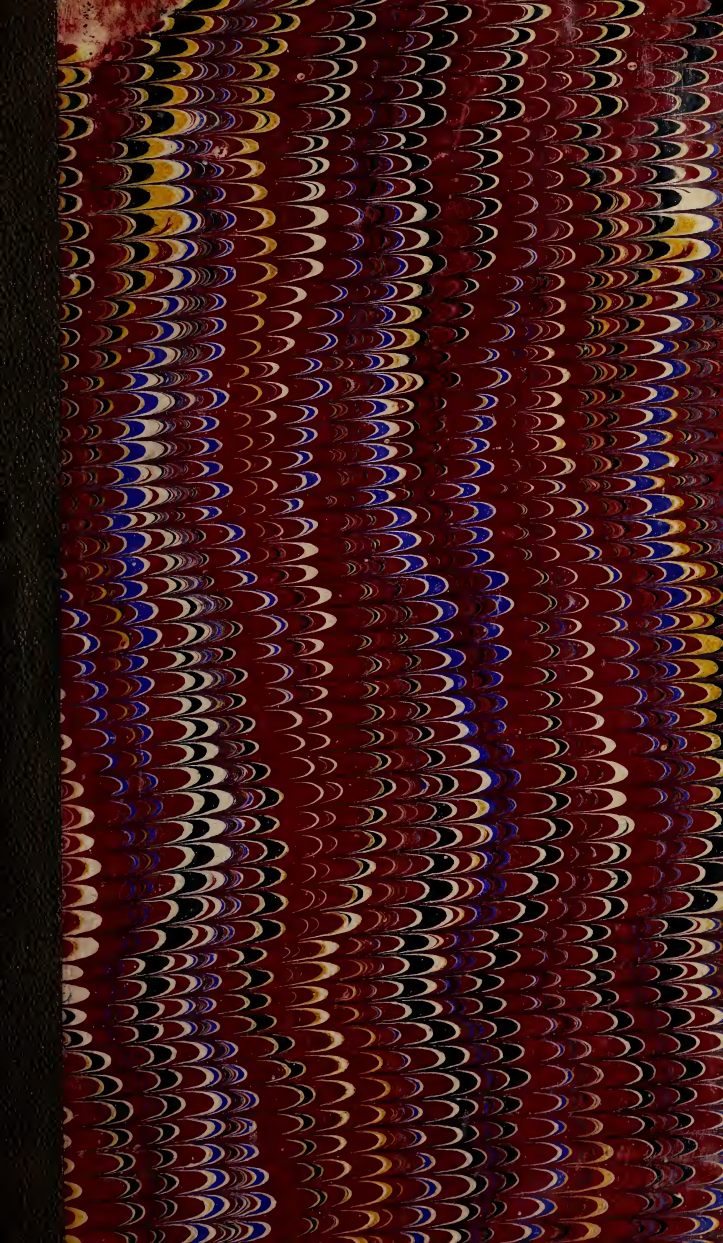
THE UNIVERSITY
OF ILLINOIS
LIBRARY

336.1

C12

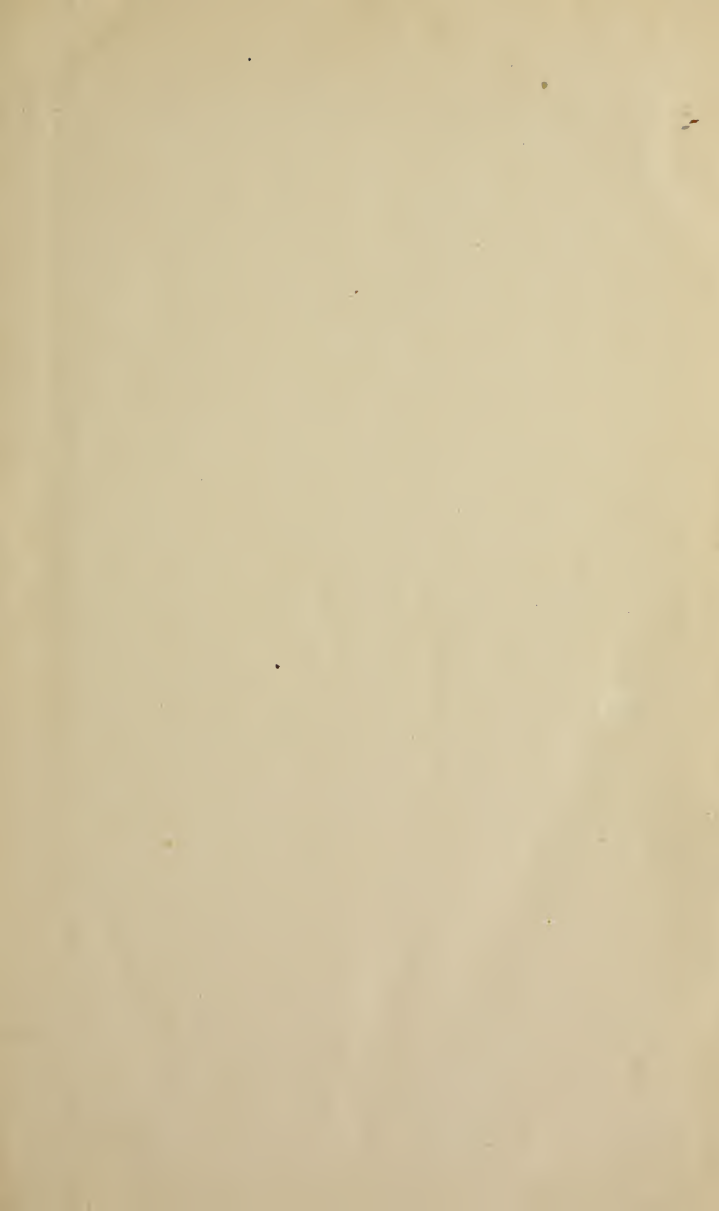
1861/65

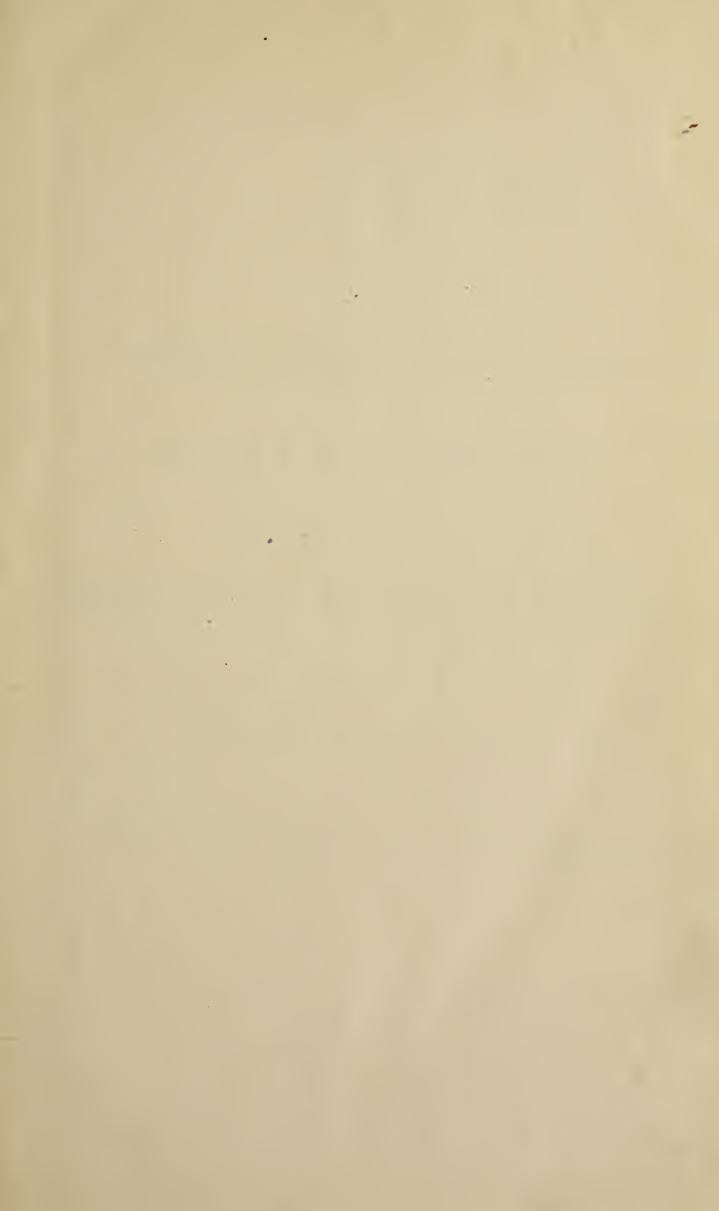
BOOKS.





Digitized by the Internet Archive
in 2016







College

ANNUAL REPORT
OF
THE SURVEYOR-GENERAL,
FOR
THE YEAR 1861.

BENJ. P. AVERY.....STATE PRINTER.

336.1

C12

1861-65

ANNUAL REPORT.

STATE LAND OFFICE,
Sacramento, December 23d, 1861. }

To His Excellency,

JOHN G. DOWNEY,

Governor of California:

SIR:—In accordance with the requirements of the Act concerning the office of the Surveyor-General, I have the honor to submit the following annual report of this office for the past year.

Respectfully,

H. A. HIGLEY,
Surveyor-General, and Register of State Land Office.

32514

SEGREGATION AND RECLAMATION OF SWAMP LANDS.

The Legislature of last winter passed an Act providing for the segregation and reclamation of the swamp lands—the segregation returns to be returned to this office, the reclamation being under the sole control of the Board of Swamp Land Commissioners.

It was made the duty of the Surveyor-General to compile from the returns of the County Surveyors a general map, showing the swamp lands, etc., a list of these lands, which, together with the affidavits, he was to transmit to the Governor. I have received returns from the following counties: Sacramento, San Joaquin, Sutter, Placer, Colusa, Yolo, Monterey, Humboldt, Sonoma, Napa, Solano, Lake, and Alameda. The County Surveyor of Santa Clara informs me that he will make his returns in a few days. These are all the counties where we are likely to conflict with the United States surveys, except Contra Costa. No returns have been sent from that county, from the fact that they have no County Surveyor.

Had the Surveyors been more prompt, my portion of the work would have been completed some time ago; as it is, I will transmit to you full returns by the first of January, in the form already submitted to you and approved.

SWAMP AND OVERFLOWED LANDS.

Surveys returned to the Surveyor-General's Office and approved, during the year ending December fifteenth, eighteen hundred and sixty-one:

Counties.	Acres.
Alameda	1,983.43
Del Norte	645.49
Colusa	2,400.00
Contra Costa	918.23
Fresno	23,459.16
Humboldt	1,658.44
Los Angeles	3.31
Marin	473.00
Mendocino	4,161.16
Merced	4,853.28
Monterey	482.96
Napa	5,055.91
Placer	7,550.56
Sacramento	42,722.52
San Joaquin	57,542.38
San Mateo	10,087.89
Santa Clara	3,605.72
Solano	21,175.37
Sonoma	579.30
Sutter	13,499.80

Counties.	Acres.
Stanislaus.....	524.31
Tulare.....	16,427.66
Yolo	16,886.85
Total	236,696.73

Of the above amount, thirty-three thousand and thirty four and seven one-hundredths acres are resurveys of forfeited lands.

Total amount of Swamp and Overflowed Lands surveyed and approved in the Surveyor-General's office since the passage of the first Swamp Land Act in 1855 (acres).....	974,150
Deduct resurveys in 1859, 1860, and 1861 (acres).....	79,981
	894,169

Total amount of Tide Lands surveyed and approved in Surveyor-General's office since the passage of the Act providing for their sale, in eighteen hundred and fifty-eight, two thousand five hundred and fourteen and eighty-seven one-hundredths acres.

TIDE LANDS.

Surveys returned to the Surveyor-General's office, and approved, during the year ending December fifteenth, eighteen hundred and sixty-one:

Counties.	Acres.
Santa Barbara	480.00
Total	480.00

SWAMP LANDS—(FRONTAGE.)

I would suggest but one change in the swamp land laws, and that is in regard to frontage. I copy from my report of last year:

"The restriction to a frontage of one-half mile on bays and navigable streams, has caused much complaint among applicants for purchase of swamp lands. I now recommend what I had the honor to submit in my report of last year, which is as follows:

'The Swamp Land Act, passed April twenty-first, eighteen hundred and fifty-eight, authorized the purchase of three hundred and twenty acres of land by one person, but restricted the purchaser to a frontage of one half mile, by legal subdivision, on any bay, lake, or navigable stream.

The Act of eighteen hundred and fifty-nine authorizes the sale of six hundred and forty acres to one individual, but makes no provision for a greater frontage. The object of the restriction was to prevent the monopoly of the narrow strip of land along the margin of water courses, which is generally higher and more valuable than that back of it, and probably also to prevent the settler on the margin of the water courses from shutting out those purchasing in the rear from communication with the water. The law, so far as it applies to such cases, should not, in my opinion, be changed. In many of the large tracts of swamp land, especially those near the junction of the Sacramento and San Joaquin rivers, there are innumerable sloughs, many of which are navigable. In consequence of their sinuosity, it often occurs that when a person desires to purchase six hundred and forty acres, in the locality in which he wishes to select the same, it is impossible for him to get one hundred and sixty acres, even, without having a greater frontage than is allowed by law. There are often islands formed by navigable sloughs, containing, perhaps, not more than three hundred and twenty acres, and yet having a frontage of two miles. The cost per acre of reclaiming swamp lands, by levees or ditches, depends upon the amount reclaimed. It is very evident that, the smaller the tract, the greater will be the cost of reclamation per acre; consequently the purchaser who is compelled to take up his three hundred and twenty, or six hundred and forty acres, in separate tracts, labors under a great disadvantage. To avoid this difficulty, I would suggest that the law be so amended as to allow the purchaser, in such cases, to take six hundred and forty acres, with the additional frontage requisite to secure that amount; *provided*, that the Surveyor-General is satisfied that the interests of the State do not suffer thereby, and that the rights of individuals are not interfered with.

It will be seen, by reference to the report of Mr. Beaumont, Surveyor of San Joaquin County, for last year, the importance of having the law amended so as to do away with this difficulty.' "

SCHOOL LANDS—FIVE HUNDRED THOUSAND ACRE GRANT.

No additional sales of these lands have been made since the date of my report of eighteen hundred and sixty. I repeat from it the disposition that has been made of this grant :

Description.	Acres.
Sold under School Land Warrants issued prior to the passage of the Act of April 23, 1858	237,760.00
Sold for cash since the passage of the Act of April 23, 1858...	261,197.83
Total disposed of.....	498,957.83

Leaving a balance of one thousand and forty-two and seventeen one-hundredths acres, which is reserved as a margin to correct errors in the final adjustment of the grant.

We have received payments, however, upon three thousand one hundred and seventy acres, which remained unpaid for on the hands of the State, and which have been relocated during the past year. There are still between six thousand and seven thousand acres of these forfeited lands; they can be speedily disposed of.

The payments of interest have, in general, been made regularly, and in some instances the principal has been paid and patents issued.

SCHOOL LAND WARRANTS,

Located under Act of April 23, 1858.

Where Located.	Acres.
In the Marysville District three locations have been made, two of which have been approved, for.....	640
In San Francisco District two have been made and one approved, for.....	320
Amount heretofore located and embraced in Report of 1860...	15,200
Total	16,160

Patents have been issued for many of these Warrant locations. In the list of Warrants located, published in my Report of eighteen hundred and fifty-eight, Nos. 270 and 275, for three hundred and twenty acres each, were not mentioned. They were located by Archibald C. Godwin, on the Geysers in Sonoma County, on the twenty-first of April, eighteen hundred and fifty-four, and a copy of the certificate of location has been filed in this office.

STATE SCHOOL LAND WARRANTS,

Located upon Unsurveyed Lands under the Act of April 18, 1859.

There have been returned to this office during the past year, twenty-nine surveys, as follows:

Counties.		Acres.
Alameda.....	4 surveys approved.....	1,280
Contra Costa.....	2 surveys approved.....	640
Humboldt.....	1 survey approved.....	320
Los Angeles.....	3 surveys approved.....	960
San Mateo.....	1 survey withdrawn.....	320

Counties.		Acres.
Santa Clara	2 surveys approved.....	800
Santa Cruz.....	1 survey approved.....	480
Sonoma	2 surveys approved.....	640
Sutter	1 survey approved	480
Tehama.....	1 survey approved	320
Yuba.....	2 surveys approved.....	2,240
Mendocino.....	6 surveys unapproved	1,920
San Joaquin.....	1 survey unapproved.....	480
Santa Clara.....	1 survey unapproved.....	480
Sutter	1 survey unapproved.....	800
		12,160
Located under this Act at date of Report of 1860.....		31,360
Total.....		43,520

SEMINARY LANDS.

Description.	Acres.
Amount of Grant of 72 Sections.....	46,080.00
Total located at date of Report of 1860..... 38,846.82	
Located in Humboldt District since..... 480.00	
Located in San Francisco District since..... 320.00	
Total returned to this office at date.....	39,646.82
Balance unreturned.....	6,433.18

The Locating Agents of the several Land Districts have informed me that they have received applications for the entire amount they were instructed to locate. I have reserved a margin of nineteen hundred acres, to correct errors.

PUBLIC BUILDING LANDS,

In the Visalia, Humboldt and Stockton Districts, are all sold; three hundred and twenty acres in the Marysville, and nine hundred and sixty acres in the San Francisco District, although applied for, have not, as yet, been returned to this office.

GRANT OF THE SIXTEENTH AND THIRTY-SIXTH SECTIONS, FOR SCHOOL PURPOSES,

Sold for Cash, under Act of April 22, 1861.

The total amount of this grant is over six millions of acres. The area of the State being estimated to be near one hundred and ten millions of acres, we can only approximate at the probable amount reserved by the General Government throughout the State for which we are entitled to select other lands; exclusive of the mineral lands, I estimate it to be near three hundred thousand acres. Lists furnished me by the agents of the Stockton, Marysville, and Humboldt Districts, show that we have already selected in those districts to the full extent that the United States officers are authorized to allow. A large number of locations can still be made; the private grants in the San Francisco District alone include certainly one hundred and twenty thousand acres of these lands, for which we should be permitted to select in part in other districts.

Steps should be taken at once to induce Congress to give us lands, in lieu of those sixteenth and thirty-sixth sections, that contain mineral, as well as for the waste lands of the Colorado Desert.

The sales of these lands, since the passage of the law, to date, are exhibited in the following tables:

Description.	Acres.
Approved locations, surveyed lands.....	73,662.13
Approved locations, unsurveyed lands.....	21,896.00
	95,558.13
Received and on file in this office awaiting the expiration of the time required by section fifth of the Act:	
Applications on surveyed lands for.....	44,776.00
Applications on unsurveyed lands for.....	23,129.00
	67,905.00
Total located.....	163,463.13

Amount sold in the different Land Districts upon the sixteenth and thirty-sixth sections proper:

District.	Acres.
In Stockton District, surveyed.....	12,708.00
In Stockton District, unsurveyed.....	960.00
In Humboldt District, surveyed.....	2,428.00
In San Francisco District, surveyed.....	1,440.00

Description.		Acres.
In Marysville District, surveyed.....	9,000.00	
In Visalia District, surveyed.....	960.00	
		27,496.00
In Marysville and San Francisco, unapproved		6,169.00
Total		33,665.00

Lands taken in lieu of sections sixteenth and thirty-sixth, reserved or disposed of by the United States:

Description.		Acres.
Stockton District, approved, surveyed.....	15,094.22	
Stockton District, approved, unsurveyed.....	18,016.00	
Stockton District, unapproved, unsurveyed.....	2,720.00	
Stockton District, unapproved, surveyed.....	1,880.00	
Stockton District, unapproved, contested.....	3,509.00	
		41,219.22
Stockton District, approved, surveyed.....	11,415.91	
Stockton District, approved, unsurveyed.....	1,480.00	
Stockton District, unapproved, unsurveyed.....	7,280.00	
Stockton District, unapproved, surveyed.....	5,445.00	
Stockton District, contested, surveyed.....	1,040.00	
		26,658.91
San Francisco, approved, surveyed	3,720.00	
San Francisco, approved, unsurveyed.....	1,440.00	
San Francisco, unapproved, unsurveyed.....	8,640.00	
Marysville District, approved, surveyed.....	16,896.00	
Marysville District, unapproved, surveyed.....	26,464.00	
Marysville District, contested.....	320.00	
		43,680.00
Los Angeles District, unapproved, unsurveyed.....		480.00
		129,798.13
Of the Sixteenth Section proper.....		33,665.00
Total amount located.....		163,463.13

From information obtained from the County Auditors of several counties, I learn that the sales of these lands, by order of the Boards of Supervisors, under the provisions of the Act of April twenty-sixth, eighteen hundred and fifty-eight, until its repeal, have been eighteen thousand seven hundred and twenty acres, as follows:

Counties.	Acres.
Merced	680
Humboldt.....	880
Placer	4,400
Sacramento	1,031
San Joaquin	6,433
Shasta	720
Siskiyou	2,320
Solano..	160
Stanislaus	336
Tehama.....	280
Tulare.....	1,480
Total, as far as reported..	18,720

Most of these lands have been paid for, either in full, or are bearing interest; some have merely been applied for, and no bond filed or further steps taken to secure them; and the parties will probably avail themselves of the advantageous terms offered under the present law to purchase from the State. In Amador, Butte, Colusa, El Dorado, Fresno, Napa, Nevada, San Francisco, Yolo, and Yuba, the county officers report that no sales have been made.

SCHOOL, SEMINARY, AND PUBLIC BUILDING LANDS SOLD TO DATE, FOR CASH.

Description.	Acres.
School 500,000 Acre Grant.....	261,197.83
Seminary Lands	39,646.82
Public Building Lands.....	5,120.00
Sixteenth and Thirty-Sixth Sections Grant.....	95,558.13
Applications on file Sixteenth and Thirty-Sixth Sections....	67,905.05
	469,427.83
Under Warrants, surveyed lands	16,160.00
Under Warrants, unsurveyed lands.....	43,520.00
Total.....	529,107.83

COUNTY BOUNDARIES.

At the request of the Board of Supervisors of Napa and Sonoma Counties, I last summer established the boundary line between the two

counties; and also a portion of the line between Napa and Solano. As usual, I found difficulty in executing the work, arising from the ambiguity and careless wording of the statutes defining boundaries. These statutes should be revised. The expenses of survey were borne by the counties.

STATISTICS.

But five reports have been received from County Surveyors. They are from—

A. D. Easkoot... County Surveyor of Marin County.
G. R. Turner County Surveyor of San Francisco County.
George E. Drew County Surveyor of San Joaquin County.
S. Worsley Smith..... Deputy County Surveyor of Santa Clara County.
Samuel S. Rice..... County Surveyor of Siskiyou County.

Mr. Easkoot suggests some changes in the present law respecting roads and highways, to which I would respectfully call your attention. His report is herewith transmitted.

Mr. Turner, of San Francisco, urges the necessity of establishing the line between that county and San Mateo, and also recommends an immediate resurvey of the city of San Francisco. The want of a proper survey is already seriously felt. If longer delayed, much loss and inconvenience will be felt hereafter.

In his report to this office, Mr. Drew of San Joaquin presents his views of a method of reclaiming swamp lands, by flowing the water on the land, thereby raising it by the deposit of sediment. His plan is a good one, in some instances, but will not serve on the lower waters of the Sacramento and San Joaquin rivers. He also points out imperfections in the law providing for Annuling Certificates of Purchase, approved April ninth, eighteen hundred and sixty-one, and recommends its repeal.

The usual circulars were issued to the County Assessors; and in addition I prepared and had printed, at the expense of the State, blank forms, to aid them in the collection of the different data they are required to report. These were forwarded, in the proper proportion, to the several counties. The following is a list of those who have reported to this office. I am sorry to say that returns have been received from twenty-eight only; a smaller number than usual.

Alameda.....M. G. Higgins, Assessor.
Amador.....Francis McGrath, Assessor.
Butte.....J. Bean, Deputy Assessor.
Calaveras.....R. W. Dowling, Assessor.
ColusaUnsigned.
Contra Costa.....J. J. White, Assessor.
El DoradoLewis Foster, Assessor.
FresnoWm. Faymonville, Assessor.
Humboldt.....A. W. Hanna, Clerk of Board Supervisors.
KlamathJ. H. Rector, Assessor.
Marin.....J. B. Jacobs, Assessor.
Merced.....Unsigned.
Napa.....Robert Crouch, Clerk Board of Supervisors.
SacramentoE. B. Ryan, Assessor.

San Diego	James McCoy, Assessor.
San Francisco	Charles R. Bond, Assessor.
San Joaquin.....	W. H. Neal, Assessor.
Santa Clara	W. R. Davis, Assessor.
Shasta.....	B. Gartland, Assessor.
Sierra.....	James Taylor, Assessor.
Sonoma.....	Charles C. Snider, Assessor.
Stanislaus	E. B. Beard, Assessor.
Sutter.....	R. A. Clarke, Assessor.
Tehama	L. B. Shaw, Assessor.
Trinity	F. D. Ketchum, Assessor.
Tuolumne	David Hays, Assessor.
Yolo.....	James McCaulay, Assessor.
Yuba	John Rule, Assessor.

In addition to the tables of statistics, Messrs. McGrath of Amador, J. Bean of Butte, R. W. Dowling of Calaveras, J. J. White of Contra Costa, L. Foster of El Dorado, L. B. Shaw of Tehama, F. D. Ketchum of Trinity, and James McCaulay of Yolo, furnished interesting reports, which are herewith transmitted, and to which I would respectfully call your attention.

In Amador County the assessment roll shows an increase in amount of taxable property of two hundred and twenty-two thousand seven hundred and thirty-four dollars over that of last year.

In El Dorado County there has been a corresponding increase of two hundred thousand dollars; and in Tehama of fifty-six thousand eight hundred and sixty-three dollars. In Yolo County there is a depreciation of two hundred and sixty-three thousand two hundred and forty-four dollars, and in Tuolumne of five hundred and sixty-eight thousand five hundred and forty-seven dollars, from the assessed value for eighteen hundred and sixty.

The Assessors of Sutter and Butte Counties mention the necessity of establishing the line between their respective counties. Mr. Bean, of Butte, states that this should be done also between Colusa, Plumas, and Butte. Having experienced much difficulty in accomplishing his duties in the absence of a properly defined boundary, he urges that the line be run prior to the first of March next. The county line between Alameda and Contra Costa should also be settled. Mr. White informs me that many persons living in the vicinity of it are not assessed at all.

Mr. Shaw, of Tehama, requests your honorable body to take some steps to induce the Government to dispose of the Nome Lackee reservation to settlers. It contains some twenty-five thousand acres. The soil is rich and productive, and the land can be readily sold to enterprising citizens, thus increasing materially the resources of the county.

All of which is respectfully submitted.

H. A. HIGLEY,
Surveyor-General, and Register of State Land Office.

STATISTICAL TABLES.

780

6,580

1,405

2,830

20,000

2,000

2,000
12,500

750
50

1,322

[illegible]

	1	5,000											
00				1		1	4						
	4												
	1	10,000										2	28
	1	2,500	2,500	1		3	9					1	3
				4	12,000								
0 }	7	60,000		1	1,500	2	20	22,000	6,500	\$2,000			
y }	16		7,000	9	11,000	4	56	35,000					
	26	78,900		4	3,800	1	20	20,000					
650	15	75,000											
				2									
			1,000	4	50,000								
600	1	3,000	3,000	2	6,000								
	24		400	8	30,000	1	17½	20,000	8,000	3,000			
	22	33,000	2,500	4	16,300								
	1					3	6	30,000					
,000	23	62,500		15	81,400	7	106						

LIVE STOCK.

STOCK SLAUGHTERED.

IMPROVEMENTS.

[illegible]

	0 00	549,900 00	1,755,893 00
	0 00	1,076,501 00	3,179,752 00
15			
	5 00	282,111 00	471,806 00
	0 00	9,914,572 00	42,362,242 00
	0 00	2,247,975 00	4,598,375 00
200			
	1 00	1,535,350 00	5,012,670 00
	0 00	1,423,081 00	1,564,998 00
		910,325 00	1,159,205 00
	3 00	2,298,352 00	4,697,063 00
	0 00	574,818 00	846,298 00
	4 00	1,529,700 00	2,532,324 00
		123,058 00	2,086,213 00
	9 00	731,716 00	1,325,917 00
	5 00	1,225,100 00	2,742,450 00
	0 00	1,275,146 00	2,156,482 00
	7 00	2,806,156 00	6,187,773 00

COUNTIES.	HORTICULTURAL PRODUCTS—NUMBER OF TREES AND VINES.																											ASSESSED VALUE OF PROPERTY.									
	Apple.....	Peach.....	Pear.....	Plum.....	Cherry.....	Nectarine.....	Quince.....	Apicot.....	Fig.....	Aloe.....	Citron.....	Lemon.....	Orange.....	Olive.....	Pomegranate.....	Pine Apple.....	Pruite.....	Persimmon.....	Pecan.....	Cherimoya.....	Almond.....	Walnut.....	Ribert.....	Gooseberry.....	Raspberry.....	Strawberry.....	Grape.....	Tons of Grapes.....	Gallons of Wine.....	Gallons of Brandy.....	Value of Fruit.....	Real Estate.....	Improvements.....	Personal Property.....	Total Valuation of Property.....		
Alameda.....	61,000	100,000	65,000	20,000	25,000	5,000	1,000	31,000	5,000				101	478	7						1,200			17,180		203 acres	600,000		30,000								
Amador.....	40,806	44,607	6,319	4,144	2,258	1,578	972	1,903	528			9	8	9	19						526	88		2,256	3,770	111,355	261,666		615		\$16,440 00		\$1,331,858 00	\$1,285,014 00	\$2,616,872 00		
Butte.....	15,560	105,000	6,080	1,700	810	5,000	200	2,520	820			50	30								150			1,300	1,90	340,000	260,500	140	700			1,693,370 00	2,117,749 00	3,811,119 00			
Calaveras.....	293,066	42,460	5,791	4,168		1,230	732	1,738	976			7	30	32	142		88				323	88	56	3,612	8,810	412,296	353,452	202½	1,200	130		991,760 00	1,745,948 00	2,737,708 00			
Colusa.....	5,000	100,000	2,000	2,500	7,000	1,700	1,100	8,364	1,182												690	276		90	180	1,302	2,943	10		47,000 00							
Contra Costa.....	28,695	17,300	9,119	3,100	3,619	715	417	1,900	2,000		7	25	20	2	90				3		11	113		1,939	6,000	31,000	106,040		1,113	57		\$679,129 00	322,352 00	950,914 00	1,952,395 00		
Del Norte.....																																					
El Dorado.....	84,965	77,103	8,232	4,898	2,497	1,578	1,303	1,816	485			38		15													617,028					546,300 00	1,205,080 00	2,042,740 00	3,794,120 00		
Fresno.....	1,621	3,199	202	105	170																36	17		5,205	4,035	135,000	85,297				2,045 00	199,087 00	63,000 00	783,808 00	1,045,895 00		
Humboldt.....	20,645	1,197	729	857	494	59	205	202	20																							293,793 00	297,618 00	717,210 00	1,308,801 00		
Klamath.....	1,509	2,100	107	18	59	13	5	18																													
Lake.....																																					
Los Angeles.....																																					
Marin.....	24,233	2,760	1,000	874	376	47	163	149	82			80	31		2						44	9		1,354	1,029	23,850	15,628	5	1,600		8,000 00	949,783 00	256,210 00	549,900 00	1,755,893 00		
Mariposa.....																																					
Mendocino.....																																					
Merced.....	10,855	10,696	901	290	227	100	60	415	188			2	4		15			4	2		7	9		145	594	56,135	141,810		2,835		10,420 00						
Monterey.....																																					
Mono.....																																					
Napa.....	98,182	93,766	13,335	3,963	4,149	1,752	914	2,325	656			25	4	1	52						858	898		5,293	10,334	9,330	430,720		2,795	100	44,105 00	1,804,601 00	298,650 00	1,076,501 00	3,179,752 00		
Nevada.....																																					
Placer.....																																					
Plumas.....																																					
Sacramento.....	113,298	63,651	33,469	9,186	6,140	3,447	6,225	5,701	2,881			40	94	31	120				4		1,414	1,400		7,180	42,817	55,581	410,958		34,700								
San Bernardino.....																																					
San Diego.....	300	4,000	2,000	200		60	110	120	180		45	35	75	1,200	160		15			5	75	120		40	200	1,500	70,000				118,020 00	71,675 00	282,111 00	471,806 00			
San Francisco.....																											350,000						32,447,670 00	9,914,572 00	42,362,242 00		
San Joaquin.....	21,200	21,050	15,870	1,000	950	700	265	890	700												35	276		2,000	15,000	90,000	227,250					1,214,900 00	1,135,500 00	2,247,975 00	4,598,375 00		
San Luis Obispo.....																																					
San Mateo.....																																					
Santa Barbara.....																																					
Santa Clara.....	60,000	15,000	25,000	5,000	3,000	2,000	2,000	10,000	2,000	200			300	300	100	50	200				300	300	100	50,000	30,000	300,000	600,000	3,000	12,500	3,000	300,000 00	2,114,479 00	1,362,841 00	1,535,350 00	5,012,670 00		
Santa Cruz.....																																					
Shasta.....	13,500	25,600	2,500	850	675	940	150	940	275																							9,500 00	68,867 00	73,050 00	1,423,081 00	1,564,998 00	
Sierra.....																																	248,880 00		910,325 00		1,159,205 00
Siskiyou.....																																					
Solano.....																																					
Sonoma.....	206,000	61,440	13,300	17,031	6,000	487	1,143	1,900	800			50	150								8,000	2,000		83,000	4,208	10 acres	1,814,000		15,719	387		1,267,190 00	654,463 00	2,298,352 00	4,697,063 00		
Stanislaus.....	6,000	20,000	1,000	500	300	50	100	500	250				5						10		25	15		1,0													

APPENDIX.

REPORTS OF COUNTY SURVEYORS.

MARIN COUNTY.

ALFRED D. EASKOOT.....County Surveyor.

OFFICE COUNTY SURVEYOR,
San Rafael, Nov. 29th, 1861. }

Hon. H. A. HIGLEY,
Surveyor-General :

SIR:—In obedience to the law, and in compliance with your instructions, I have the honor to submit the following report of this county :

SWAMP AND OVERFLOWED LANDS.

The number of surveys made on swamp and overflowed lands since my last report are three, numbering from 79 to 82. Number of acres, four hundred and seventy-three and thirty-eight one-hundredths; No. 82 being a resurvey of No. 68, so the actual number of acres surveyed are only three hundred and six and ninety-seven one-hundredths. The number of acres of swamp land remaining unsurveyed are about one thousand. No surveys made on school or tide lands.

There has not been any of the swamp land reclaimed in this county, to my knowledge, although some of the claimants have made a commencement. A large body of swamp land in this county could be drained and made valuable for grazing or even agricultural purposes. In order to do this, a ditch should be cut along the bays and navigable creeks, about four feet deep and about five feet wide, and then there should be an embankment made on the outside of the ditch, about four feet high by five feet wide; the small creeks should have a dam made across them, connecting with the embankment, with a gate so as to keep out the tide water and let out the water that may run into the creeks from the mountain streams, or what tide water may leak through the embankment; then by cutting some smaller ditches through these lands, so as to lead the water to the creeks, the land will become drained, and in a short time it would be suitable for cultivation or grazing. But to do this,

I think, it would cost more than one dollar per acre. This should be done by large companies or the State.

ROADS AND HIGHWAYS.

The law of eighteen hundred and sixty-one, on Roads and Highways, gives the Supervisors of the county the whole control of the roads and highways, which, I think, is entirely wrong, for as long as the Supervisors have the power to appoint viewers on roads there will not be any roads in this county. In the first place, the Supervisors have enough to do without attending to roads; and in the second place, they are not very particular who they appoint as viewers, for many times men are appointed who are interested in the lands where the roads are to go through, and as they have not qualified nor given bonds, they view out the roads to suit themselves or their friends, and look but very little to the interest of the public, and every year there are petitions to make some alterations in the roads, and all the money that has been expended on these roads will not be of any benefit to the public, when if the roads had been viewed out properly in the first place, and made where they should have been made, it would not have been necessary to have them altered, and the work that has been done on them would have been of some use to the county. If the county must pay for the lands that are taken for roads, let them be laid out where they should be, and have the right kind of men to lay them out. Now if the Legislature would pass a law that every county should elect two Road Commissioners, who should qualify and give bonds for the faithful performance of their duties, and that these two Commissioners, in connection with the County Surveyor, should form a Board of Road Commissioners, whose duty should be to lay out all roads, and to meet once in every three months for the purpose of receiving petitions for roads, and when any petition is presented to them praying for a new road or an alteration in any road, the Commissioners should go and examine said proposed roads, and if in their opinion the public good requires a new road or alteration, they should have the road surveyed and marked out, and have it made a permanent location, then what money the county raises for roads let it be expended within the line of said roads, then by changing the name of the poll tax, and call it a road tax, I think that in a short time we would have some roads that could be travelled in the winter season without endangering the lives of both man and beast.

I have not finished the map of swamp land surveys in this county.

The total value of taxable property in this county is one million seven hundred and ninety-six thousand four hundred and twenty-five dollars.

Total tax, twenty-eight thousand seven hundred and seventy-seven dollars and seventy-two cents.

ALFRED D. EASKOOT,
Surveyor of Marin County.

SISKIYOU COUNTY.

SAMUEL S. RICE.....County Surveyor.

OFFICE COUNTY SURVEYOR,
Oro Fino, Nov. 12th, 1861. }

Hon. H. A. HIGLEY,
Surveyor-General:

SIR:—In accordance with the law defining the duties of County Surveyors, I respectfully submit the following, my report of all surveys made by me during my term of office, beginning October, eighteen hundred and fifty nine, and ending October, eighteen hundred and sixty-one. Owing to the small amount of business transacted, I did not report the surveys of the last year, and will embrace them in this report.

SURVEYED LANDS.

The whole number of acres surveyed in this department amounts to eight hundred and eighty, as follows, viz:

Survey No. 157.—The southeast quarter and the northeast quarter of the southwest quarter of Section No. 22; the west half of the southwest quarter of Section No. 23; and the northwest quarter of the northwest quarter of Section No. 26, of Township No. 42, North, and Range No. 9, West, Mount Diablo base and meridian, embracing three hundred and twenty acres—surveyed November fourth, eighteen hundred and fifty-nine, for E. F. Heroy.

Survey No. 160.—The southwest quarter of the northwest quarter of Section No. 23, of Township No. 42, North, and Range No. 6, west of Mount Diablo base and meridian, containing two hundred acres—surveyed December fifteenth, eighteen hundred and fifty-nine, for Feenaghty & Brother.

Survey No. 173.—The west half of the southeast quarter of Section No. 21, of Township No. 42, North, and Range No. 9, west of Mount Diablo base and meridian, including eighty acres—surveyed March twenty-seventh, eighteen hundred and sixty, for Smith & Bros.

Survey No. 179.—The north half and the southwest quarter of the southeast quarter of Section No. 15; and the west half of the northeast quarter, and the west half of the southeast quarter of Section No. 22, of Township 42, North, and Range No. 9, west of Monte Diablo base and meridian, containing two hundred and eighty acres—surveyed October fifteenth, eighteen hundred and sixty, for Thomas Widdess.

UNSURVEYED LANDS.

The whole number of acres surveyed in this department amounts to six hundred and forty acres, as follows, viz:

Survey No. 174.—The north half of Section No. 3, of Township No. 43, North; and the southeast quarter of Section No. 34, of Township No. 44, North, and Range No. 9, west of Monte Diablo base and meridian, containing four hundred and eighty acres—surveyed August ninth, eighteen hundred and sixty, for J. S. Mathews.

Survey No. 178.—The southwest quarter of Section No. 28, of Township No. 42, North, and Range No. 9, west of Monte Diablo base and

meridian, including one hundred and sixty acres—surveyed September twenty-sixth, eighteen hundred and sixty, for Morris Priddy.

SWAMP AND OVERFLOWED LANDS.

From the records of my predecessors, I am unable to determine whether any lands of this character have been surveyed or not.

I have had no applications for surveys of this kind, and am of opinion that there are but few, except in the vicinity of Klamath and Tule Lakes, where, I understand, there are large tracts.

I shall proceed as early as practicable, in the spring, to survey any lands of this denomination in that vicinity.

SCHOOL AND SEMINARY LANDS.

I have made no surveys under this head, there being no applications for lands of this character.

As to the table of statistics required by your instructions, I shall have to refer you to the report of the County Assessor, since my business does not call me from home enough to collect materials for a report of my own.

All of which is respectfully submitted.

SAMUEL S. RICE,

Surveyor of Siskiyou County.

SANTA CLARA COUNTY.

CHARLES T. HEALY.....County Surveyor.

OFFICE COUNTY SURVEYOR,
San Jose, Sept. 24th, 1861. }

Hon. H. A. HIGLEY,
Surveyor-General:

DEAR SIR:—Inclosed you will find the map, etc., of the segregation of the swamp lands in this county, and I herewith give you a general description of said land.

The land lying between the Penitencia creek and Steamboat slough is generally of a sandy or gravelly soil, which is easily reclaimed. But the Rancho de los Esteros has spread itself over it, thereby frightening off people wishing to locate the same. It is overflowed by the Penitencia and Coyote creeks—on both of which there are embarcaderos—and by Steamboat and several minor sloughs. The tide very seldom overflows to much extent, so that it could be very easily reclaimed. Captains John and Thomas West have ditched and reclaimed about three hundred acres, near Steamboat slough, and it is now very good grain land. They found that by a plentiful irrigation of artesian water the alkali was entirely driven from the soil. Salt grass still springs up in some places, but does no damage. There is a thin-bladed grass growing upon the higher portion of this land, which cattle and horses seem to like very well. Between the Penitencia and Coyote creeks, the soil is almost entirely of sand, and a very good crop of grass grows upon it,

but it overflows so late in the year that no crop can be raised until properly ditched. The town of Alviso is situated at the head of Steamboat slough, and upon swamp lands. The property owners there have just completed a dam and lock across the Guadalupe, and a small canal from the head of Steamboat slough to the Guadalupe, thus being able, when the tide is up, to turn the whole volume of water into Steamboat slough. This will add very much to the facility of navigating that slough.

The Guadalupe, although it has two or three warehouses on its banks, is not navigated now at all, on account of its being very crooked. From there west, the land can be reclaimed, although no one has as yet attempted such a thing. There are two or three minor sloughs making up into it, but are of not much consequence until you come to Whistman's slough, which is immediately north of the Yrigo Rancho. Upon this slough there is a landing, and vessels regularly ply to and fro. It was once located at this landing by Rodgers, but he afterwards abandoned the location. Running thence west, we pass over some very good land, and numerous small sloughs, besides two or three quite large ones, until we come to the San Francisquito creek, the boundary between this and San Mateo County. At this place is situated an embarcadero, which is of some importance, as there is much trade at this place.

The lands embraced in my survey are all tide lands, and, except where improved, are covered with a thick growth of salt weed. I am told, however, that hogs like this kind of grass very much.

There have been but three locations in this county, previous to the passage of the Act of May thirteenth, eighteen hundred and sixty-one, viz :

First location, by Martin Murphy, Jr., by Act of April twenty-eighth, eighteen hundred and fifty-five ;

Second location, by Patrick W. Murphy, by Act of April twenty-eighth, eighteen hundred and fifty-five ;

Third location, by ——— Paul, by Act of April twenty-eighth, eighteen hundred and fifty-five ;

All of which, I believe, have been completed and patents obtained.

I have made a few locations lately, and have applications for about twenty more, which I will complete as fast as I can.

The railroad coming into this county enhances the value of the swamp lands very much, and the moneyed men of San Francisco are beginning to look out for it. I think I have applications enough to take up all in the county.

All of which is respectfully submitted.

Your obedient servant,

CHARLES. F. HEALY,
County Surveyor.

By S. WORSLEY SMITH, Deputy.

SAN FRANCISCO COUNTY.

GEORGE R. TURNER.....County Surveyor.

OFFICE OF CITY AND COUNTY SURVEYOR,
San Francisco, October 5th, 1861. }Hon. H. A. HIGLEY,
Surveyor-General of California :

SIR :—In compliance with the law, I herewith present to you my annual report :

The County of San Francisco being small in area, and the larger portion of it occupied by the city and several Spanish grants, there remains but a small extent of lands for the County Surveyor to work upon. This land has been owned or held by parties in possession, for the past ten years, and there are but few surveys necessary.

The majority of my work is in the city, and it is of such a character that it would be impossible to embody it in a report suitable for your office.

I have made but few surveys in the county during the past year. With one exception, they have all been confined to work under the sixteenth and thirty-sixth section Act, which locates land for school purposes. I have returned them to your office as fast as surveyed. The exception was a small piece located near the Seal Rock House, on land supposed to belong to the United States Government, (containing one hundred and eighteen acres,) located by H. H. Toland and Andrew Glassell.

It will give me great pleasure to return to your office, in a few days, a map of the City and County of San Francisco, showing the surveys made by me during the past four years.

I would again call your attention to the necessity of having the boundary line located between the Counties of San Francisco and San Mateo.

I would also call your attention to the fact of a public want of a re-survey of the city of San Francisco, as, there being no initial point, and no defined width to the streets, determined by law, there necessarily arises a great deal of confusion in regard to the lines of the blocks, which, one day, will result in a serious loss to the city.

Hoping you will act upon my suggestions, I have the honor to remain,

Your obedient servant,

GEO. R. TURNER,
City and County Surveyor.

SAN JOAQUIN COUNTY.

GEORGE E. DREW.....County Surveyor.

Hon. H. A. HIGLEY,
Surveyor-General : OFFICE COUNTY SURVEYOR,
Stockton, Dec. 14th, 1861. }

SIR :—In compliance with the law, and instructions received from your office, I have the honor to submit herewith my report for the two months

I have been in office. The short term which I have occupied the position of County Surveyor, enables me to present but a meagre report; but lest it might be construed as a neglect of my duties, or want of respect for your office, I present you with a report of my official acts during my term:

SWAMP AND OVERFLOWED LANDS.

I find, by reference to the books in this office, that there have been made in this county, eight hundred and nine surveys of swamp and overflowed lands. The large number of surveys made by my predecessor during the past four years leaves me but little to do. I have surveyed and returned to your office seven surveys of swamp and overflowed lands, embracing an area of seven hundred and twenty-one and eighty-five one-hundredths acres.

In addition to this I have made three surveys of land forfeited to the State, embracing five hundred and four and fifty-nine one-hundredths acres.

I have also located three school land warrants, of one hundred and sixty acres each, which location has been returned to your office.

My opinion is that some important changes should be made in the present swamp land laws; the Act to provide for the annulling of certificates of purchase of lands sold on a credit, approved April ninth, eighteen hundred and sixty-one, should be repealed. Under that Act, tens of thousands of acres of swamp land are now held in the name of parties, where the interest remains unpaid for three or four years. The payment of one year's interest enables a party to hold possession of the land for five years, as against other parties who wish to purchase the land. The remedy is too much on the circumlocution office style of doing business.

I am forced to differ with the Swamp Land Commissioners, and the engineers appointed by them, in their indiscriminate system of reclaiming the swamp lands. So far as I know, in this section the universal practice is to levee the water off. Now there are thousands of acres of land in this county which I would reclaim by leveeing the water on. You may perhaps ask, how? and why? I answer: by building a levee of sufficient height and strength at the lower end or side of the land sought to be reclaimed, thus permitting the water to flow on and become dead water. By this means a large amount of deposit or sediment from the rivers is obtained yearly—at least an average of from four to six inches, and in many places much more. The land could be used each year for grazing purposes. By this process, in a few years the lands would be effectually reclaimed, then build a light levee to provide against an unusual height of water, and the work is done. By the present system a large amount of labor and money is required at once, an annual expense must be incurred to keep the levees in repair, and the land is always below high water and subject to inundation. You have an example at Sacramento of the strength of levee required to keep the waters within the river banks—so it is in the tule lands; if you attempt to confine the water to the channels, immense levees will be required. I am satisfied that the present system is one that will cause the expenditure of immense sums of money and be finally abandoned; space, however, will not permit me to go into detail in this matter.

COUNTY ROADS.

In the improvement of county roads we are making little or no progress. A vote of our county last Fall refused to pay a special road tax, consequently we are enjoying the privilege of dragging through the mud. I am in hopes the next generation will see the necessity of having good roads, but I have no hopes of the present.

Truly, your obedient servant,

GEORGE E. DREW,
County Surveyor.

REPORTS OF COUNTY ASSESSORS.

AMADOR COUNTY.

FRANCIS McGRATH.....County Assessor.

OFFICE COUNTY ASSESSOR,
Jackson, November 19th, 1861. }

Hon. H. A. HIGLEY,
Surveyor-General:

SIR:—In compliance with the law and the instructions contained in your circular, I respectfully submit the following report:

The blanks supplied me from your office have made the taking of statistics so much more easy, simple, and convenient, than heretofore, that I have been enabled to make the report full and accurate.

FRUIT TREES AND VINES.

The increase in the number of certain kinds of fruit trees and vines is shown in the following table:

Description.	No. in 1860.	No. in 1861.
Apple Trees.....	32,263	40,806
Peach Trees.....	35,596	44,607
Pear Trees.....	5,951	6,319
Grape Vines.....	159,902	261,666
Hop Vines.....	.....	500

It is pleasing to see the attention and care that our citizens are giving to the cultivation of fruit trees and vines; that they succeed well is proved by the size, flavor, and quality of fruit.

Mr. Pardee, of Ione Valley, gathered this fall, eight hundred pounds of grapes from a vine of only six years growth.

Among our heaviest fruit growers I mention Messrs. Palmer & Co., Jeretich & Jordan, Dr. Page, Cheyron & Bro., B. Burt, C. Peters, Maj. Barbour, and J. H. Milton.

STOCK.

Stock of most kinds have decreased in number and value, yet many of our farmers having seen the necessity of improving the quality of their stock, have already secured many horses, bulls, rams, and jacks, of fine blood. Mr. H. S. Woodward, of Ione Valley, (the owner of Young Rattler, half brother of California's favorite, Jerome C. Davis's Rattler,) has during the last summer added seventy-five fine American horses and mares to his band. Mr. J. P. Martin, a large owner of stock, has much increased the value of his herd by the great pains he has taken in improving the breed. Messrs. Castle & Barrett, Crowningshield & Brother, H. Watters, A. Sollars, and many others whom I could mention, have expended large amounts of money in their successful endeavors to improve the quality of their stock.

MISCELLANEOUS.

We have three distilleries, manufacturing four thousand gallons of spirits per year, and the demand for the article manufactured steadily increasing.

We have one tan yard, which is in a very flourishing condition, producing leather of a most durable and excellent kind.

My predecessor, in his annual report, mentioned a coal mine in this county. It is situated one and a quarter miles southwest of Ione City, and owned by Mr. F. C. Hall. He has already driven in a tunnel to the distance of three hundred feet; the vein averaging in thickness about five and a half feet. The coal is worth, at the mine, five dollars per ton.

In comparing the assessment of last year with that of the present, it will be perceived that there has been a gratifying increase; the assessment of last year amounting to two million three hundred and ninety five thousand one hundred and thirty-eight dollars, (\$2,395,138,) while that of the present is two million six hundred and sixteen thousand eight hundred and seventy-two dollars, (\$2,616,872.) This increase is owing more, perhaps, to the location and improvement of land that has heretofore remained unoccupied, than to any other cause. I also find, from an investigation of the books of last year, the whole number of assessments to have been sixteen hundred and twenty-five; those of the present year run up to nineteen hundred and fifty—showing the increase of the number of taxable inhabitants of the county to be three hundred and twenty-five.

Hoping that the report will meet with your approbation, I subscribe myself,

Your obedient servant,

FRANCIS McGRATH,
Assessor of Amador County.

BUTTE COUNTY.

W. D. VANTINE.....County Assessor.

OFFICE COUNTY ASSESSOR,
Oroville, August 19th, 1861. }

Hon. H. A. HIGLEY,
Surveyor-General:

SIR:—I herewith enclose a statement of the agricultural and other statistics of Butte County, compiled from the assessment books for the year eighteen hundred and sixty-one, as also an abstract of the assessed value of real and personal property, with the amount of taxes for State and county purposes levied thereon.

Farmers, generally speaking, have reaped an average crop, though prices are low for grain, stock, etc.

The several branches of industry in this county, to wit: agricultural, mercantile, and mining, appear to be in a prosperous condition. One difficulty we experience is, that such a number of disputes, followed by suits at law, arise from lands claimed by possession, and covered by Spanish grants, that there have not been the improvements made that would have been made had these matters been settled.

The breed of stock of all kinds in this county is improving slowly, but steadily.

Fruit growing increased during the present year, and the greater part of the finer fruits are of excellent flavor. I will here mention the orchards of Messrs. Bidwell, Briggs, Henshaw, Woolen and Durham.

The facilities for the cultivation of grape vines in this county, in many locations, are good, and some of the different classes of grapes are as fine as any raised in the State.

The mercantile business in this county is in, I think, a prosperous condition, though for some time past not so extensive as we could have wished; however, the trade with Oroville is slowly progressing, and as we have a railroad being built to connect Oroville with tide-water, we have no doubt of future prosperity, and within a short period of time. Within the past year we have had considerable improvements made at our county seat, in good and substantial buildings, and will, undoubtedly, within the incoming year, witness much more.

The principal seats of mining enterprise are at Oroville, Inskip, Dogtown, Cherokee Flat, Yankee Hill, and Forbestown. River mining I do not think is carried on to such an extent as in former years, although there are many claims being worked in Main, Middle, North and South Forks of Feather river, above Oroville.

In quartz mining there is considerable work, and but few claims paying well. The heaviest mining operations in the county, successfully prosecuted, are located near Dogtown, on the hills of Big and Little Butte creeks, it being generally tunnel mining, and as a general thing, requiring the outlay of much capital.

The number of miles boundary necessary to be run in this county, at least, prior to March first, eighteen hundred and sixty-two, I should say would be about sixty miles; the said lines to be run between Butte and Sutter Counties, Butte and Colusa Counties, and Butte and Plumas Counties, there being much difficulty experienced by the Assessors of the several counties in making their assessments.

Of electro-magnetic telegraphs in this county, we have but one; its value is five thousand dollars, and extends about fifty-four miles in length.

Of timber of the county, the greater part is cedar and pine; oak is to be found generally in the valley, but the lands are heavily timbered.

The assessment of the present year, you will perceive, is not so large as in eighteen hundred and sixty. This may be accounted for by the decrease in the valuation of stock since last year.

Tax of eighteen hundred and sixty-one, proportioned in the different funds, as follows:

Fund.	Amount.
State Fund.....	\$22,866 71
General County Fund.....	19,055 60
School Fund.....	3,811 11
Road Fund.....	1,905 56
Indigent Sick Fund.....	13,338 92
Special Fund.....	9,527 80
Railroad Fund.....	19,055 60
Total Tax for 1861.....	\$89,561 30

I am, Sir, very respectfully, your obedient servant,

W. D. VANTINE,

Assessor of Butte County.

By J. BEAN, Deputy.

CALAVERAS COUNTY.

ROBERT W. DOWLING.....County Assessor.

OFFICE COUNTY ASSESSOR, }
Mokelumne Hill, November, 1861. }

Hon. H. A. HIGLEY,
Surveyor-General:

SIR:—I beg leave herewith to transmit my annual report, in compliance with an Act of the Legislature of the State of California, passed April seventeenth, eighteen hundred and sixty.

AGRICULTURE, HORTICULTURE AND LIVE STOCK.

It is gratifying to state that this county, although making no pretensions to agriculture—as, in fact, she was not designed by Nature, by reason of the unevenness of her surface, to excel to any great extent in that branch of industry—is yet showing those evident marks of progress even in that particular, as to probably place her upon an equality with many of her more favored sister counties in the State. Cereals of divers kinds are cultivated wherever practicable, but, as it cannot be expected that

our hill sides will ever vie with the rich lowlands of the valleys, a slight falling off in the number of acres and consequent decrease of the number of bushels of wheat, compared with last year, will not be very surprising, although the aggregate number of acres under cultivation this year, is over eighteen hundred larger than that of the preceding year. This difference, however, is mainly attributable to the marked increase in the yield of hay, viz.: a gain of nearly twenty-four hundred tons, or about seventy per cent. over the product of last year. But if we have no special cause of self-adulation in the way of farm products—horticulture, on the other hand, has received an impetus highly laudatory to the enterprise and industry of our citizens. Fruit trees and vines of all kinds, have nearly, in all cases, been doubled in number this year, but in no particular is the increase so surprising as in the augmentation of the number of apple trees; for while these summed up in eighteen hundred and sixty, twenty thousand nine hundred and ninety-two, the aggregate for this year presents the astonishing array of two hundred and ninety-three thousand and sixty-six, or fourteen times the number of last year. Grape vines have more than doubled their yield, increased in about the same ratio; whilst the number of gallons of wine is nearly treble.

The extraordinary depreciation in the value of all sorts of horned cattle has not failed to be sensibly felt in this county, as well as elsewhere, hence the small increase of the number of this kind of property over last year. And to the increased demand of draft and riding stock in the neighboring Territory of Nevada, is probably owing the decrease of horses and mules, as compared with the returns of last year.

MINING INTERESTS.

The mines, the principal source of revenue of this county, continue to yield bountifully. This remark is, however, not applicable alike to all the different localities, but to be taken in an average sense. Those localities in which the gold yield is dependent solely on the produce of surface ground, have seen, or will ultimately see, their sources refuse to yield the yellow stream; but those favored sections, where deep diggings prevail, have, generally, an undisturbed and long future before them, and there are, fortunately, many such in this county. The untiring energy and perseverance of the miner have, within the past year, developed and opened up some vast tracts of subterraneous gold fields, thus securing remunerative employment to a large number of workmen. The most prominent among these discoveries is, probably, the region extending from Mokelumne Hill to the Calaveras River, for some six miles along what is known as Chile Gulch. The quartz mining interests are duly represented in this county, although not to that extent as in other portions of the State. The regions about Angels and West Point, are the places where the most remunerative veins are worked at present. This branch of mining has not received, since the memorable days of eighteen hundred and fifty-one, that share of attention which its importance entitles it to, but is, nevertheless, generally working its way into the public favor and enlarging its number of votaries. It would be superfluous formally and methodically to announce here the discovery of extensive copper mines in the southeastern portion of this county, even if I had not alluded to it already in my last annual report. The fact of the existence of these mines is so well known, not only in this State, but, through shipments of the ore to the Atlantic States and Europe, also in those remote countries, that it would be entirely useless to adduce any

testimony in their behalf. But, considering that it is my province to report more minutely upon this subject, from its importance, both present and prospective, I deem it proper to enlarge here upon it. In my last annual report, when referring to these then only lately discovered mines, the following sentence occurs: "I am confident in the undoubted mineral wealth of this section of our county." The experience of the last twelve months shows that I was not mistaken in my conclusions, and I take occasion here to reassert every particular of the above sentence. Practical experiments and the application (though to a limited extent as yet) of science, has led, since the above was written, to vast discoveries of new leads and the tracing up of the old ones. But, extensive as the discoveries of the past twelve months have been, the extent of the copper fields in this county is far from being explored or even traced yet, and I here venture to predict, from actual personal observation resulting from extensive explorations in these regions, that copper fields will, before long, be discovered east of the Bear Mountains, in what I call the Cherokee range, lying north of east of, and running parallel with the Copperopolis mines. Still further east, another of these mineral belts is found, and mining laws established by the miners for their government. But these discoveries (on the San Domingo) are of a too recent date to enable me to report intelligently in regard to their extent or richness; but enough of them is known, however, to warrant the belief that that whole region will, ere long, be subjected to a thorough exploration. I will here refer again to my last report for the following passage: "It would amply repay the State for all the outlay that a State Mineralogist might make in giving this section a thorough scientific investigation, not only in connection with the discoveries already made, but to inaugurate a system of researches which will, as I am satisfied, lead to the discovery of other minerals, such as sulphur, antimony, and tin, traces of which have already been found by prospectors, unaided as they were by those indispensable guides—arts and science." The State Geologist has visited the copper region, and probably will make his official report in regard to it. But if, for some reason or other, he may have been hampered or restricted in his investigations, I would again respectfully represent, through you, the desirability and necessity of a systematic and thorough scientific exploration. Our miners and capitalists possess the energy and perseverance to work and develop any mine or region that promises even a distant return; but where, as in this kind of mining, science must be added to practical application, in order to be successful, it evidently becomes the duty of the State to lend a helping hand, and this the more so, when, as in the present case, the prospect is so encouraging, and only needs the fostering care of the State to insure, at no distant day, an inexhaustible mine of wealth to the whole country. It would be impossible, and certainly too uninteresting in a document like the present, to give a detailed description and statistics of the different leads and claims; but, in order to present some general and tangible idea of copper mining, I propose to append here an extract of a letter written to me by Mr. Hiram Hughes, an intelligent miner, and the original discoverer of copper ore in this county:

"GOPHER MINES, October 24th, 1861.

Our Napoleon Lead, on Hog Hill, is proving Number One; we are down thirty-five feet on a lead of copper ore, varying from two to three feet in width. It is of the gray copper. Two men raise two tons per

day, besides doing the timbering. The assays from the different qualities of sulphurets, up to the best ore, run from sixteen to twenty and eighty-five one-hundredths of metallic copper, five dollars in silver, and a trace of gold, per ton. We have also the auriferous tellurium, which assays as follows, per ton :

ASSAYS OF TELLURIUM.

24.30 ounces Silver.....	\$1 30 per ounce.....	\$31 59	
1.82 ounces Gold.....	20 67 per ounce.....	37 61	
Total per ton.....	.....	.....	\$69 20

We have shipped sixty-six tons of copper ore from this claim, and have forty more ready for sacking. The tellurium lead is seven feet in width, between two copper leads."

TIMBER.

As regards timber, for lumbering and other purposes, our supply is abundant, and consists chiefly of the different varieties of pine; and speaking of this, I should not forget to inform you that within the past year another Mammoth Grove has been found in this county, and a land claim, which includes the grove, has been taken up by Mr. Hutchings, of Magazine notoriety, so that we are likely to have opposition, even in Mammoth Groves, Big Trees, etc.

IMPROVEMENTS, ETC.

For the number of saw mills, number of feet of lumber manufactured, and other improvements, I refer you to the following table :

Description.	No.	Value.
Steam Saw Mills	8	
Water Power Saw Mills	7	
Total number of Saw Mills	15	\$29,750 00
Number feet of Lumber Sawed	7,320,000	215,120 00
Steam Quartz Mills	13	
Water Power Quartz Mills	34	
Total number of Quartz Mills.....	47	64,650 00
Mining Ditches.....	68	
Miles of Mining Ditches.....	583	271,400 00
Inches of Water discharged	9,731	
Toll Bridges	8	27,800 00
Ferries.....	4	5,300 00
Blacksmith Shops	45	18,400 00
Butcher Shops	21	18,250 00
Foundries.....	2	2,500 00
Breweries.....	11	23,200 00

Description.	No.	Value.
Gallons Beer Brewed last year @ 60c $\frac{7}{8}$ gal.....	144,800	86,880 00
Soda Factories.....	4	4,520 00
Stage Lines.....	3	12,000 00
Telegraph Line	1	1,000 00
Catholic Churches	5	12,200 00
Protestant Churches	5	5,000 00
Theatres.....	4	3,800 00
School Houses.....	13	7,630 00
Hospitals.....	3	5,000 00

And to show you that we are "some" on billiards, we have in use sixty-six tables, valued at seventeen thousand five hundred and ninety dollars.

I find a steady increase in the number of taxable inhabitants since eighteen hundred and fifty-nine. The increase in eighteen hundred and sixty was two hundred and thirty-five; of this year about the same, or over four hundred in two years, and consequently an increase in the total value of property.

TAXABLE PROPERTY.

The taxable property, personal and real estate, for this year, sums up as follows, viz :

Real Estate	\$991,760 00	
Personal Property	1,745,948 00	
		\$2,737,708 00
Against that of 1860 :		
Real Estate	\$813,034 00	
Personal Property	1,614,761 00	
		\$2,427,795 00

Leaving a balance in favor of eighteen hundred and sixty-one of three hundred and nine thousand nine hundred and thirteen dollars, or a gain of about eleven and one third per cent. over last year.

All of which is respectfully submitted.

ROBERT W. DOWLING,
Assessor of Calaveras County.

CONTRA COSTA COUNTY.

J. J. WHITE.....County Assessor.

OFFICE COUNTY ASSESSOR,
Martinez, November 20th, 1861. }

Hon. H. A. HIGLEY,
Surveyor-General:

SIR:—In compliance with your circular, and in conformity with the law, I herewith respectfully submit the following as my annual report:

This county was organized in the year eighteen hundred and fifty. Its boundaries are, North by San Pablo Bay and Sacramento River, East by San Joaquin, South by Alameda, and West by the Bays of San Francisco and San Pablo.

OFFICERS.

Name.	Office.	Residence.
Thomas A. Brown.....	County Judge.....	Martinez.....
M. Shepard.....	District Attorney.....	Martinez.....
L. C. Wittenmyre.....	County Clerk & Recorder.	Martinez.....
J. J. McEwen.....	Sheriff.....	Martinez.....
Obid F. Alley.....	Treasurer.....	Martinez.....
N. J. Clark.....	Assessor.....	San Pablo.....
M. R. Barber.....	Public Administrator.....	Martinez.....
John O'Doherty.....	County Surveyor.....	Martinez.....
H. H. Fassett.....	Coroner.....	.....
G. H. Barrett.....	Supervisor First Township	.....
Ira J. True.....	Supervisor Sec'd Township	.....
J. T. Walker.....	Supervisor Third Township	.....
F. M. Warmcastle.....	Senator Eighth District...	.....
Charles B. Porter.....	Assemblyman.....	.....

TERMS OF COURTS.

Seventh District Court—Hon. E. W. McKinstry, Judge. First Mondays of January, May, and September.

County Court—Hon. Thomas A. Brown, Judge. First Mondays of August, November and February, and third Monday of May.

Court of Sessions—Hon. Thomas A. Brown, Judge; E. F. Weld and Wm. Givan, Associates. First Mondays of August, November and February, and third Monday of May.

Probate Court—Hon. T. A. Brown, Judge. Fourth Monday of every month.

Board of Supervisors—Regular meetings first Monday of February, May, August, and November.

AGRICULTURE.

This county is in quite a flourishing condition, financially and otherwise; large tracts of land are cultivated in every direction. The following is the number of acres enclosed and cultivated :

Number of acres enclosed	31,327
Number of acres cultivated	55,564

There are vast quantities of land still uncultivated, (remarkably fertile and most advantageously located,) owing to the unsettled condition of Mexican claimants. It is the great curse and drawback to not only the prosperity of this county but the prosperity of the State at large.

The amount of tillable and grazing land in this county, according to the best information I can get, is about one hundred and ninety-five thousand acres. The swamp and overflowed lands, about forty-nine thousand acres. The latter is attracting considerable attention. Since the year eighteen hundred and fifty-seven, I am informed, about fifteen thousand acres have been secured.

The valleys in this county extend all the way from fifteen to twenty miles, and are well watered. Even on the hills and mountains innumerable springs are found, affording excellent pasturage the whole year round for stock of all kinds. Cattle and sheep have done very well; the prices for them are very low and discouraging. Considerable improvement is continually going on in all descriptions of stock-raising in this county—particularly in sheep and horses; the latter, as exhibited at our county Fair, showed that no little attention or pains were taken to improve the breed. In the business of sheep-raising it is certainly difficult to select a better locality, both as to climate and advantages of pasturage, and several persons have taken advantage of the same, as can be seen by the numerous herds that are grazing in the different valleys all over the county. Nor have I heard of any disease existing among them, other than what can be easily remedied by proper care and attention.

In the business of farming this year, I find that in San Ramon and vicinity, for miles around in fact, about an average crop has been harvested—principally wheat, and of a very good, clean quality. This locality is very much favored for producing wheat; seldom, if ever, is there a failure of the crop, and producing from forty to seventy-five bushels to the acre.

How different is it in the valley of San Pablo and its vicinity? where a large quantity of land has been put into cultivation, without producing an average crop, and that, too, of an inferior kind, particularly the wheat; barley and oats have produced better, and the quality fair. As a general thing, our farmers here in San Pablo are not practical men. They go in for cultivating large tracts of land, and plough their land rather in a slovenly manner, and skimming it over, scarcely turning over enough of the soil to cover the seed. In my neighborhood, (San Pablo valley,) all those who farmed in this way are bankrupt; those of my neighbors who are practical men, and even pay for their land from four to five dollars per acre rent, and farm small quantities, have invariably made money every year, and are comparatively comfortable and inde-

pendent. I see plainly, from my experience, that farming little land and cultivating it well is what will pay.

AGRICULTURAL PRODUCTS.

Products this year are as follows: Twenty-five thousand one hundred and forty-seven acres of wheat; eleven thousand nine hundred and thirty-six acres of barley; eight thousand one hundred and ninety-six acres of oats; one hundred and five acres of rye; two hundred and sixty-nine acres of corn; seventy-two acres buckwheat; fifty-nine acres of peas; four hundred and thirteen acres of beans; ninety-nine acres of sweet potatoes; thirteen acres of onions; nine thousand three hundred and thirteen acres of hay; three acres of flax; eleven acres of tobacco; forty-one acres of alfalfa; twenty-five acres of broom corn; fifty-one thousand pounds of butter; thirty-nine thousand one hundred and ninety-seven pounds of cheese; two hundred and ninety-one thousand eggs; ninety-seven thousand pounds of wool; one hundred and sixty pounds of honey.

FRUIT TREES AND VINES.

Fruit of every description is not cultivated in as great quantities, perhaps, as in other counties in the State, but the quality is not excelled of any description; and as for the grape culture, this climate is unsurpassed, as is proven by the quality and perfection of the different varieties cultivated, as well as the quality of the different descriptions of wine produced.

In the orchard of Dr. Streutzel, in Alhambra valley, within two miles of the county seat, (Martinez,) five different varieties of the grape were cultivated to great perfection, from which was manufactured white, red, Lacrime, and Angelica wine, considered by epicures and connoisseurs superior to any wines of the kind in the State; also, equally as high flavored as most foreign wines of the same description. The Doctor's orchard is certainly an exception. The extent of it is about twelve or fourteen acres. There are ten thousand grape, two thousand apple, two thousand peach, one thousand pear, six hundred plum, five hundred apricot, fifty orange, lemon and citron, trees, in a very flourishing state; two olive, eighty pomegranate trees, and numerous other descriptions of fruit to be found in this orchard, all in a beautiful state of cultivation, and located in the most romantic valleys in the State. In other districts of the county, all around the base of Mount Diablo, there are numerous small valleys where the vine is cultivated also extensively, and yields abundantly.

LIVE STOCK.

In enumerating the quantity of live stock, I find that there are, of horses of all kinds, about eight thousand one hundred and nineteen head; of American, three thousand five hundred and nineteen; tame and wild half-breeds and Spanish, four thousand six hundred; mules, five hundred and thirty-five; asses, five; cows, five thousand and sixty-nine; calves, four thousand one hundred and thirty-six; stock cattle, eleven thousand nine hundred and sixteen; beef cattle, five thousand and thirty-seven; oxen, seven hundred; sheep, twenty-one thousand; goats, one thousand nine hundred; hogs, thirty thousand, large and small; chickens, thirty-nine thousand; turkeys, twenty-one thousand; ducks, one thou-

sand three hundred; geese, one thousand seven hundred; bee hives, one hundred and twelve.

The county also boasts of an inexhaustible supply of coal, particularly in the region of Mount Diablo, where several mines are now open and working, from which large quantities are being exported to market. Shafting and tunnelling is going on extensively, and a large amount of capital is being invested in further developments of the kind. Very recently, other coal mines have been discovered in the neighborhood of San Pablo creek, within four or five miles of the village of San Pablo. I confidently prognosticate that when the proper encouragement is given, by the settlement of land titles, the resources of the county, when more thoroughly developed, will really be astonishing. In short, the progress and prosperity and marked improvements in agriculture, the mechanic arts, and business generally, is very encouraging.

The roads throughout the county are in a very bad condition, particularly the road from San Pablo to the county seat. Travellers on this route run risks of their lives in going to and from these places in any kind of vehicle. The journey most of the way—a distance of eighteen miles—is very mountainous, and it will require the sum of three or four thousand dollars to put it in travelling condition.

The importance of establishing more clearly the boundary line between this county and Alameda, is very necessary, owing to the difficulty of making the necessary assessments. Very many persons in the vicinity of this line are not assessed at all, or prefer being assessed in Alameda County, as the tax levied in that county is much less than in this. Therefore, it is to be hoped that the Legislature will order a proper survey of this line.

It will be seen, by referring to my statistical report, that comparing the value of property in the county for the year eighteen hundred and sixty-one with the value of property for the year eighteen hundred and sixty, the amount falls far below for the year eighteen hundred and sixty-one, in personal property a little over three hundred and twenty-three thousand dollars, owing to the great depreciation in the value of stock of all kinds.

TOTAL VALUE OF ALL KINDS OF PROPERTY, FOR THE YEAR 1861.

Description.	Value.
Real Estate.....	\$679,129 00
Improvements.....	322,352 00
Personal Property.....	950,914 00
Total.....	\$1,952,395 00

Al of which is respectfully submitted.

J. J. WHITE,
Assessor Contra Costa County.

EL DORADO COUNTY.

LEWIS FOSTER..... .. County Assessor.

OFFICE COUNTY ASSESSOR,
Placerville, Oct. 5th, 1861. }Hon. H. A. HIGLEY,
Surveyor-General :

DEAR SIR:—In conformity with law, I have the honor to transmit the following, my annual report, as Assessor of El Dorado County :

For the past three years I have found it extremely difficult to meet, in full, the requirements of the law, in my reports. And an experience of four years as Assessor, has led me to the belief that the detailed statements of most of the County Assessors who pretend to be at all accurate, are mere matters of speculation, and not founded upon correctly ascertained data. Your desire being only to obtain *facts*, I shall make no draw upon the imagination to particularly answer all the inquiries made in your circular to County Assessors, but rather confining myself to actual statistics obtained, than to any *appearance* of official exactness, which all Assessors, of any experience, must know is the merest pretence and guess work.

Although El Dorado may be strictly called a mining county, yet nearly every available spot, whether hill or valley, is pre-empted for agricultural, horticultural, or grazing purposes. The total amount of land claimed is two hundred and five thousand nine hundred and twenty-three acres ; of which there are under cultivation twenty-eight thousand seven hundred and fifty-eight acres—leaving for grazing purposes one hundred and seventy-seven thousand one hundred and sixty-five acres. The amount pre-empted since my report of last year, is over fifty thousand acres. This is a striking indication that the heretofore migratory miners who till of late have made California but a temporary abiding place, are now laying the foundation for permanent and happy homes in the future. This is not to be wondered at, since a well cultivated acre or two, even in our mountainous regions, in many instances prove as remunerative as large farms in the older States.

The quantity of grain grown is not large, the greater portion of which is cut for hay—this being the most profitable farm crop raised, especially on lands not favorably located for irrigation. Nearly all who are engaged in agriculture are, more or less, interested in fruit growing, in which they succeed as well, if not better, than in most of the agricultural counties. At least, fruit raised in this county brings as fair, if not a higher price, than that in any other location in the State.

Coloma, the primitive county seat of El Dorado, is as renowned for its fruit as it is for being the place where gold was first discovered. The gardens there are among the oldest in the county, and, from peculiarity of location and climate, are probably not excelled by any in the State. Other locations of our county are fully equal to that of Coloma in the production of quality and quantity of fruit, but it is not quite so early in ripening.

FRUIT TREES, ETC.

The number of fruit trees, as appears from the statistics of the present year, is as follows :

Description.	Number.
Apple.....	84,965
Peach.....	77,103
Plum.....	4,900
Cherry.....	2,497
Pear.....	8,832
Apricot.....	1,816
Nectarine.....	1,787
Almond.....	496
Fig.....	485
Quince.....	3,303
Grape-vines.....	617,028

Much interest is manifested in the cultivation of the grape, as appears from the increased number reported. Last year the number reported was three hundred and fifty thousand. This year it amounts, in round numbers, to six hundred and seventeen thousand, the greater number of which are but two years old. There are quite a number of vines, however, that are from four to seven years old, which have already borne sufficient to test the wine-making qualities of the grape—proving, beyond doubt, that wine-making, at no distant day, will be an important branch of California industry.

In the eastern portion of the county, the various species of pine is found in great abundance, consisting of the sugar, pitch, and spruce, of which the best of lumber is made and shipped, in immense quantities, to the valleys below.

There are in the county twenty-one steam and nineteen water-power saw mills—all doing a flourishing business. There are also five steam and seven water-power quartz mills—not more than one third in operation. Also, one water-power grist mill, four soda factories, one distillery, twelve breweries, one machine shop, eight cement mills, fourteen toll roads, fifteen toll bridges, five marble quarries, and over two hundred miles of telegraph line.

There are sixty-four ditches, being in the aggregate, six hundred and forty-seven miles in length, the principal of which are the South Fork canal, the Eureka, and the Pilot and Rock creek. The South Fork is taken out of the South Fork of the American River, and furnishes water to Placerville, Gold Hill, and surrounding country. The Eureka canal takes up the waters of the North Forks of the Cosumnes River, and supplies the county from Diamond Springs to the southwestern line of the county. The Pilot and Rock creek takes up the water of Pilot and Rock creek, and furnishes Georgetown, Greenwood, Spanish Flat, and, in fact, the whole divide between the South and Middle Forks of the American River.

LIVE STOCK.

The increase in the number of live stock during the past year is not large, resulting from the fact that all small dealers are getting out of the business, at almost any sacrifice, while large dealers—with the present low prices—have had little to stimulate them to increase their bands.

The number, as appears from my statistics, is as follows:

Description.	Number.
Horses.....	2,277
Colts.....	421
Mules.....	1,130
Jacks.....	36
Cows.....	4,021
Calves.....	1,965
Oxen.....	1,584
Stock Cattle.....	4,732
Hogs.....	7,632
Sheep.....	3,285
Goats.....	510

In comparing the assessment of last year with this, it will be seen that there has been a steady increase in the value of real estate and improvements. The total amount of property assessed is three million seven hundred and ninety-four thousand one hundred and twenty dollars. The total value of real estate is five hundred and forty-six thousand three hundred dollars. The value of improvements is one million two hundred and five thousand and eighty dollars. The amount of personal property is two million forty-two thousand seven hundred and forty dollars. An increase over last year's assessment of two hundred thousand dollars.

Very respectfully,

LEWIS FOSTER,
County Assessor.

TEHAMA COUNTY.

L. B. SHAW.....County Assessor.

OFFICE COUNTY ASSESSOR,
Red Bluff, November 20th, 1861. }

Hon. H. A. HIGLEY,
Surveyor-General :

SIR:—In compliance with law, and your circular of the fourth of March last, to County Assessors, I herewith transmit to you the following as my official report of the statistics of Tehama County for the current year :

The many difficulties in the way of an Assessor's obtaining the information you desire, and which is of so much interest to the State at large, are sufficiently obvious to serve as an explanation for what may be considered inaccuracy or neglect. As, for instance, in the quantity of hay and grain, which can only be approximated, for the reason that the Assessor commences the discharge of his duties in the month of March, when the crop is growing, and according to law not liable to taxation;

while in the course of three months, his neighbor, who has harvested his hay and grain, may be assessed for the same.

COUNTY BOUNDARIES AND AREA OF SQUARE MILES.

For the boundaries of this county I refer you to an Act of the Legislature entitled an Act to alter and define the boundaries of Tehama County, approved April nineteenth, eighteen hundred and fifty-nine, and inasmuch as you require suggestions relative to the necessary alteration of county boundaries, it may not be inappropriate in me here to remark that the Act above referred to was against the well known wishes of a large majority of the people of Tehama County, and its immediate repeal would meet their hearty approbation, and be nothing but a simple act of justice to all concerned.

The area of square miles can hardly be approximated, for the reason that the most of the boundaries of this county are natural and have never been surveyed. As, for instance, first—the line beginning at a point on the Sacramento River, on a section line, and running west to the summit of the coast range of mountains. Second—the line beginning at the mouth of Battle creek and following its middle channel to the western line of Plumas County. The two other lines are equally indefinite.

AGRICULTURAL LANDS.

There are about two hundred thousand acres of tillable land, most of which is admirably adapted to the production of grains and fruits of almost every variety, and vegetables of every description, and in the greatest abundance. With reference to vegetables this is particularly the case on the east bank of the Sacramento River, where the beautiful mountain streams of Antelope, Battle, Mill, and Deer creeks, all afford, the year round, bountiful supplies of water for purposes of irrigation.

As shown by the Assessor's books, there are deeded from the United States and Mexico, in this county, one hundred and twenty-three thousand and fifty-eight acres of land, ninety-one thousand one hundred and eighty-nine of which are contained within the surveys of six Mexican grants, to wit: the Soucos Rancho, the Rio de los Molinos Rancho, the Bosque Rancho, the Boranco Rancho, the Rancho de los Flores, and El Rancho del Primer Cañon. These immense grants of land, after being for years in litigation—which necessarily prevented their improvement and cultivation—have all been finally confirmed, and I believe, patented to their respective owners; since which time they have been constantly disposing, to good and industrious farmers, at moderate prices, and on easy terms, homes for themselves and their families, affording the purchaser an opportunity of paying, within a few years, for the land, from a mere surplus of productions from the soil.

The remaining thirty-one thousand eight hundred and sixty-nine acres are generally along the low foot-hills and in the small valleys on creeks which empty into the Sacramento River; and while the lands are somewhat broken and not of the best quality for agricultural purposes, yet they produce fair crops of hay, grain and vegetables, and afford better range for stock of all kinds than the low lands along the Sacramento River.

NOME LACKEE INDIAN RESERVATION.

One of the most important subjects to which it is my duty to call your attention, is this Reserve; located in the southwestern portion of this county, between and near the head waters of Elder and Thames creeks, and containing twenty-five thousand acres of land, it has ceased to be of any benefit whatever to the Indians or in any manner beneficial to the interests of the Government. This place was established in eighteen hundred and fifty-four, and at that time the location and objects of the Reserve were calculated to give protection to the citizens and their property in that portion of our county. Then that section of country, which at that time was in Colusa County—it being before the formation of this—was sparsely settled with whites, while it was crowded with Indians who were constantly committing depredations. The purposes for which the Reservation was established have been attained, and there is no longer any necessity for its existence.

Within the limits of this Reservation is some excellent agricultural land, while it affords the best grazing range in all this section of country. It is now of no practical benefit to the Indians, as it is not cultivated for their subsistence and furnishes them neither a home nor protection.

This tract of land, if cut up or divided into small parcels, say one hundred and sixty or three hundred and twenty acres each, and sold to our citizens, would open to industry and enterprise a rich and productive section of our county, and add greatly to our taxable property.

In view of all the circumstances, it is suggested that our next Legislature take some steps by which the General Government may be induced to make some disposition of it to our citizens, either for cash or on time—respecting no one's right to pre-emption; as parties who have gone on the reserved lands of the Government as mere trespassers, should not now be allowed to reap benefits resulting from their wrong doing, in preference to those who have always respected the Reserve.

MINERAL SPRINGS.

The celebrated Tuscan Springs are situated within seven miles of the town of Red Bluff, in a beautiful cañon completely surrounded by mountains, presenting an appearance romantic in the extreme. They are about thirty in number, and what is most remarkable, each differing in some particular. The waters of these springs are thrown to the surface by the action of the hydrogen gas, through the fissures of the rocks, and all embraced in an area of one acre of ground.

The waters contain sulphur, salt, sulphuric acid, muriatic acid, boracic acid, magnesia, strongly impregnated with iron and iodine, and many other minerals. They have proven themselves beneficial to most of the diseases to which the human system is heir, especially in rheumatism, syphilis in all its forms and stages, colds, coughs, inflammation of the eyes, and diseases of the throat and lungs. Mr. M. Meador, the proprietor of these wonderful springs, has erected steam or vapor baths, produced by the burning of the gases which escape from the springs, which perhaps render them superior to any other baths on the Pacific coast. The gas which heats the water is taken from the same springs which supply the bath tubs. The country around these springs abounds with game, and with a small expenditure of money this could be made one of the most beautiful and pleasant watering places in the world.

MILLS.

We have four grist mills now in operation :

1. The Red Bluff Mill, which is owned by Messrs. Williams & Co., of Sacramento; it has three run of stone, is propelled by steam, and was built in 1854, at a cost of thirty thousand dollars. It has ground during the present year thirty-five thousand bushels of wheat, three hundred bushels of rye, and three hundred bushels of Indian corn; making in all thirty-five thousand six hundred bushels of grain.

2. The Battle Creek Mill, which is owned by W. C. Carver; it has two run of stone, is propelled by water, and has ground during the past year twenty-five thousand bushels of grain.

3. Dye & Butler's Mill, which is situated on Antelope creek, opposite and within four miles of the town of Red Bluff, is a large and splendid frame building, with one run of stone, to which they expect to add two more by the next year; it is propelled by water, and has just commenced grinding.

4. The Tehama Mill, is situated opposite and within one mile of the village of Tehama. It has just been completed at a cost of about thirty thousand dollars; is of immense size, built of pebble stone, with four run of stone. Has ground with one run of stone, in fourteen hours and ten minutes, sixty barrels of flour, and has ground since its completion, about five thousand bushels of wheat. This mill is owned by Samuel Jaynes, Esq., and the estate of the late P. L. Miner, and is a credit to Tehama County as well as its builders.

There is also a grist mill now being erected on Deer creek, which is intended to be propelled by water, and to have two run of stone. It is the property of W. P. Mayhew, Esq.

We have now but one saw mill, which is situated on the head waters of Thames creek, is owned by Messrs. Gillman & Paten, and has sawed during the present year, seven hundred thousand feet of lumber.

The Antelope Mill, which was destroyed by fire in August last—before which time it had sawed about four hundred thousand feet of lumber—was owned by J. F. Dye, Esq.

BRIDGES AND FERRIES.

We have but two bridges, both of which are located on Cottonwood creek. We have five ferries—all located on the Sacramento River.

TELEGRAPH.

We have in this county forty-two miles of electro-magnetic telegraph, with two offices, which have taken in during the year four thousand dollars.

LIVE STOCK.

There is a large increase since last year in stock of every description; but, owing to the unprecedented depreciation in value, the assessment on stock alone is not so large as it was last year. So low, in fact, is it, that our farmers and stock raisers are, many of them, disposing of all but sufficient to answer their individual uses, and are turning their attention to various other industrial pursuits. The only branch of stock raising which offers any inducements to stock raisers is that of sheep; and I believe there has been more attention paid to, and interest taken

in them during the past year, than any other. There are now in this county many imported bucks of the French Merino and Southdown breeds. As will be seen by reference to the statistics, we have in this county:

Description.	Number.
Horses	1,968
Mules.....	1,024
Cattle.....	38,947
Sheep.....	16,850
Hogs.....	22,407

ASSESSMENT OF PROPERTY.

Assessment for the present year.....	\$2,143,076 00
Assessment last year.....	2,086,213 00
Increase of assessment.....	\$56,863 00

Thus will be seen, by reference to the statistics of our county since its formation, a steady increase from year to year in wealth and prosperity.

You will please find enclosed schedule of statistics.

All of which is respectfully submitted.

L. B. SHAW,
Assessor.

By A. H. WEBB, Deputy.

TRINITY COUNTY.

F. D. KETCHAM.....County Assessor.

OFFICE COUNTY ASSESSOR,
Weaverville, October 7th, 1861. }

Hon. H. A. HIGLEY,
Surveyor-General:

SIR:—In compliance with your request, I have the honor to submit my report for the current year. The report is not as full in many particulars as I could have wished. I find it almost impossible to comply strictly with the requirements of the law, but have done so to the best of my ability. Our county is principally a mining county, our population is rather migratory. There is a decided advance in general improvements, and in our prosperity, although the assessment list does not show

that way, property is given in at lower rates than heretofore. Cattle, in particular, have fallen in price at least thirty per cent. from last year's rates; the cause, I think is, that the supply is increasing very fast. People are giving the rearing of stock more attention than heretofore.

The area of our county I have no means of arriving at correctly; its boundaries are irregular, mostly natural land-marks, by mountain and stream. Trinity has a large proportion of mineral lands; what agricultural land there is, is located in mountain valleys and benches, and occasionally river bottoms, and generally very productive. We have an abundance of vegetables for our own home consumption. Of grain and flour we import a large proportion. As it is more profitable to cut grain green, for hay, than to let it ripen for grain, by this course we have plenty of hay for home use. Corn does well in some portions of the county. On the farm of Mr. Henry Allen, at Hyampom, a valley on the South Fork of Trinity River, fifteen acres produced sixty-five bushels per acre. Our mountain sides and valleys are well adapted to grazing purposes, except in winter, on account of the deep snow, when we drive most of our stock to the Sacramento valley.

Of timber, it is generally abundant, and in many localities inexhaustible. The varieties are sugar, pitch, and spruce pines, several species of oak, and some ash, which last is scarce. We have the cottonwood, alder, madrona, manzanita, which are not thought to be of much value except for fuel.

Our mines are river, surface, and tunnel diggings, which pay fair average wages; some very rich. Of quartz we have no mines developed.

Of fruits, we have many small orchards, but they do not meet the expectations of their growers, except in favored localities. We have very late frosts in the spring, which blast most of the fruit in elevated and exposed positions. In the western portion of the county, on the Trinity River bottoms, the orchards are very productive. The fruit mostly raised is the peach and apple. The grape is somewhat cultivated, but does not seem to be a source of much profit.

Bees have been introduced into our county this year, and seem to be doing well.

Our roads, until the last few years, were the hardest kind of pack-mule trails, but now we have in the more populous portion of the county good wagon roads, for which we are more indebted to individual exertion than to our road laws. We have two turnpike roads, on which tolls are taken, but our roads are still far from being what they should be for safety and comfort.

Of schools, we have district schools four in number, three of which are quite small, the other will compare favorably with the best district schools. Our population is scattered over a large extent of country, and in many places sparsely settled; not over two thirds of the children can attend schools.

Of manufacturing establishments, we have none of importance. Two tanneries on a small scale, four breweries, and a few shops for repairing, are about all we have.

For further particulars I refer you to accompanying schedule. Hoping this will meet with your approbation,

This is respectfully submitted.

F. D. KETCHAM,
County Assessor.

TUOLUMNE COUNTY.

DAVID HAYS County Assessor.

OFFICE COUNTY ASSESSOR,	}
Sonora, October 7th, 1861.	

Hon. H. A. HIGLEY,
Surveyor-General:

DEAR SIR:—In accordance with the laws of this State concerning the duties of County Assessors, I herewith return you the following statistical report of the value and resources of this county for the year eighteen hundred and sixty-one. According to the report, you will find that our county is not in as flourishing a condition as when I submitted my last report. The causes are various; the principal one being the continued breaking and destroying of two of our largest ditches last fall and winter, which threw out of employment a large number of miners, causing many to remove from the county, in which there seemed to be but little protection to property; also, affecting all branches of business, depreciating the value of real estate, and all kinds of improvements. Another cause has been the erecting of large and costly quartz mills, some of which have failed to pay, causing a large depreciation in that kind of property, as you will see by comparing this with my former report.

Our placer mining is as extensive and in as flourishing condition as formerly, since the settlement of our ditch troubles. River mining is still good, a larger number being engaged in that branch of mining than at any other period during the last three years.

The fruit culture is on the increase, but the value of all kinds is much less than last year. The grape culture is improving yearly; more on account of the manufacture of wine than for any other use, some being of as fine a quality as any made in the State.

The lumber interest of our county is as extensive and as prosperous as in past years. All kinds of live stock have depreciated in value about one third less than last year.

The assessed value of real estate is one hundred and fifty-one thousand four hundred and twenty-five dollars; of improvements, one million three hundred and sixty-five thousand nine hundred and twenty-five dollars; of personal property, one million two hundred and twenty-five thousand one hundred dollars; and a total value of two million seven hundred and forty-four thousand four hundred and fifty dollars, or a depreciation of five hundred and sixty-eight thousand five hundred and forty-seven dollars from the assessed value for the year eighteen hundred and sixty. For more and full particulars, please refer to schedule enclosed.

All of which is respectfully submitted.

DAVID HAYS,
County Assessor.

YOLO COUNTY.

JAMES McCAULEY.....County Assessor.

OFFICE COUNTY ASSESSOR,
Washington, Oct. 5th, 1861. }

Hon. H. A. HIGLEY,
Surveyor-General:

SIR:—In conformity with the law, and in compliance with your circular, I respectfully submit the following report of the statistics of Yolo County for the present year. And, if in commenting upon any of its subject matter, I am not as elaborate as could be desired, I hope you will attribute it to those intervening difficulties that are so apparent to every one who is acquainted with the duties of an Assessor.

Yolo County is located in the heart of the great Sacramento valley, lying between thirty-eight degrees twenty minutes and thirty-eight degrees fifty minutes north latitude, and between one hundred and twenty-one degrees twenty-eight minutes and one hundred twenty-two degrees ten minutes longitude west from Greenwich; bounded on the north and east by the Sacramento River, on the south by the Rio de los Putos, and on the west by the dividing ridge of mountains known as the Coast Range. Its county seat (unfortunately for its citizens, a very migratory thing,) is at present located at the town of Washington, on the Sacramento River, and directly opposite the city of Sacramento.

Yolo is an agricultural and grazing county, and as such, possesses, perhaps, one of the most desirable localities in the State, as it already finds a competent market for its productions in the city of Marysville at a convenient distance on the one side, and the city of Sacramento on the other; together with the Marysville and Benicia Railroad (in prospective) running directly through its centre.

It contains, according to the census of eighteen hundred and sixty-one, a population of four thousand seven hundred and forty-seven; being an increase over eighteen hundred and fifty-two of three thousand four hundred and forty.

LANDS.

The greater portion of the lands of this county are covered by Spanish grants, to wit:

First. The Rancho de Carmel, or Knight; comprising eleven leagues, and covering the young and prosperous town of Knight's Landing.

Second. The Laguna de Santos Calla; comprising ten leagues, and lying on the north side of the Rio de los Putos, or Putah Creek.

Third. The Rancho Cañada de Capay; comprising seven leagues, covering the valley lands of the Cache Creek cañon and surrounding hills.

Fourth. The Rancho Jesus Maria; comprising six leagues, and lying on both sides of the Rio Jesus Maria or Cache Creek—covering the little village of Cacheville, formerly county seat.

Fifth. The Guessisose, or Gordon, containing two leagues, lying immediately on the north bank of Cache Creek, and owned by William Gordon & Sons.

Sixth. The Rancho los Putos, or Wolfskill, lying on both sides of Putah Creek, adjacent to the foot hills of the Coast Range of mountains.

Of the swamp and overflowed land of the county I have but little practical knowledge, and as it comes more directly under the notice of the County Surveyor, I presume that he will give in his report all information that I could give.

Of the agricultural lands it is necessary to say but little. Like all other lands in the Sacramento valley, their fertility and fruitfulness are well known throughout the State. Practical experience has proven them capable of producing in abundance all the grains and fruits indigenous to almost every clime and zone. Wheat, barley, rye, oats, corn, broomcorn, buckwheat, beans, beets, peas, potatoes, pumpkins, onions, melons, etc., yield up to the husbandman an abundant harvest; whilst the growing of tobacco, hops, hemp, flax, etc., is no longer an ideal speculation, but a proven fact. And from my own practical knowledge of their cultivation in the Atlantic States, I am well satisfied that, with a proper knowledge of their cultivation, they can be grown, "not only as specimens of possibility," but more profitably than in the Atlantic States. From what I have seen of the growing of tobacco in the county, I am satisfied that it can be grown to advantage wherever the land can be irrigated, and cured in our September and October sun with but little fear of frost or rain. Sugar cane, alfalfa and herdsgrass, flourish well; also, cotton and rice. Here the apple, pear, peach, plum, and their kindred varieties, grow in such rich luxuriance as well might tempt another Adam to fall from grace.

We have, according to statistics:

LAND UNDER CULTIVATION.

Description.	Acres.
Land enclosed.....	100,000
Land cultivated	50,795
Wheat.....	12,000
Barley.....	28,000
Hay lands.....	9,000
Rye.....	100
Corn.....	200
Broom Corn.....	30
Potatoes.....	400
Peas.....	50
Beans.....	20
Onions.....	25
Buckwheat.....	10
Land cultivated in Fruit Trees, about.....	9,960

Of Fruit Trees and Vines we have as follows :

FRUIT TREES.

Description.	Number.
Apple.....	50,000
Peach.....	98,000
Pear.....	11,456
Plum.....	23,076
Cherry.....	2,760
Nectarine.....	20,423
Apricot.....	6,248
Quince.....	500

VINES, ETC.

Description.	Number.
Grape Vines.....	24,623
Strawberry Vines.....	25,000
Wine, gallons manufactured.....	500
Peach Brandy, gallons manufactured.....	200

Thus you will see that our farmers have a partial eye to the luxuries as well as the comforts of life, and, whenever the titles to land are settled, you see at once the evidences of thrift and comfort—those indicative precursors of a happy home.

MINERAL LANDS.

As I have already denominated this an agricultural county, therefore little will be expected under this head, but I will digress a very little. Gold has been found in the southwestern part of the county. Flattering prospects of quicksilver have also been discovered, and bids fair to become an item of interest.

TIMBER.

The timber of Yolo consists chiefly of the scrub oak and cottonwood, growing upon the margins of streams, and upon the hills a rough pine is found in limited quantities, all of which is useful only for fuel. Much inconvenience is experienced by our farmers in the unequal distribution of timber, as one man's land is cumbered too much, while another has none.

IMPROVEMENTS.

Our churches, school houses and dwellings are fast assuming the appearance of stability and comfort. Substantial plank fences follow quickly in the footsteps of a substantial title to the land.

RAILROAD.

The Marysville and Benicia Railroad is located and graded through the centre of the county, running through the towns of Knight's Landing and Yolo City. Length of road, fifteen miles; graded at a cost of about one thousand dollars per mile.

CACHEVILLE AGRICULTURAL DITCH.

This ditch, twenty feet wide by six deep, was constructed about two years since, by Messrs. Hund, Hutton, Hoppin, Lowe, Yerby, and others, at a cost of about three thousand dollars per mile. The water is taken out of Cache Creek, five miles above the town of Cacheville, running directly through the town, and thence, by branch ditches, to the various farms in the surrounding vicinity. From the favorable location of the lands, several thousand acres can be irrigated by it. It is an institution, certainly, deserving the notice of agricultural patrons, as by its means, trees, vines, grains, grasses, and vegetables of every kind, besides the many flowers that ornament the dwellings round about, are made to flourish in profuse luxuriance. This ditch also presents an admirable site for a flouring mill, or a woollen factory, as the surplus discharge of water is adequate to the propelling of any desired force.

GRIST MILLS.

Of this class of improvements, we have three; the first, the Eagle Mills, situated in the town of Knight's Landing, is a first class institution, taking a premium at the State Fair in eighteen hundred and sixty. It was built and is owned by Z. Gardner. Of the other two, one is owned by William Platt, and situated on Putah creek; the other, owned by J. S. Cook, and situated near Yolo City, both built at a cost of about five thousand dollars, each; propelled by steam power, and doing a profitable business.

SAW MILLS.

We have one, situated in the town of Washington, erected about one year since, by the Messrs. Hunt, at a cost of about six thousand dollars. This mill procures its lumber by rafting down the Sacramento River.

LIVE STOCK.

The progress in this industrial pursuit is gratifying to every one who has either pride or interest in this branch of husbandry. The best blood horses, cattle and sheep, are being imported at marvellous rates, and already their issue are seen to grace almost every farm. The Spanish cow and horse are being superseded by the best breeds of Europe and the Atlantic States. Judging from the interest now taken in this

interesting and profitable pursuit, we may readily presume that the quality of our stock will soon compare favorably with the best in the older States.

We have as follows :

Description.	Number.
Horses.....	4,641
Mules	457
Asses	10
Cattle	21,779
Sheep.....	34,087
Hogs.....	17,000
Chickens.....	35,000
Turkeys.....	3,500
Ducks.....	500
Geese	220
Wool, lbs.....	17,000

BUTTER AND EGGS.

This is an item of no little importance to many farmers in our county. It is quite a prominent currency upon the cash books of our country stores, and many a landlady may be seen financiering over her dozens of eggs and yards of calico. Instances are not unfrequent among our farmers where they support themselves entirely from the receipts from butter and eggs.

BEEES.

We have in this county about one thousand stands of bees, which are in a thriving condition, doing well even in the dryest parts of the county.

The assessed valuation of property in the county, you will find to be two hundred and sixty-three thousand four hundred and forty-four dollars less than last year. This is owing to the depreciation in cattle, sheep, and hogs, which is shown by the following table :

RECAPITULATION.

Description.	Value 1860.	Value 1861.
Hogs	\$54,994 00	\$42,500 00
Sheep	114,055 00	68,174 00
Cattle	419,526 00	217,790 00
Totals.....	\$588,575 00	\$328,464 00

Difference of totals, two hundred and sixty thousand one hundred and eleven.

ASSESSMENTS, 1861.

Description.	Amounts.
Assessed Value of Land.....	\$510,286 00
Assessed Value of Improvements.....	371,050 00
Assessed Value of Personal Property.....	1,275,146 00
Total	\$2,156,482 00

TAXES.

State Tax on each \$100.....	\$0 62
Tax for County General Fund on each \$100.....	0 45
Interest Tax, 1855, on each \$100.....	0 10
School Tax on each \$100.....	0 15
Hospital Tax on each \$100.....	0 05
Road Tax on each \$100.....	0 05
Total Tax on each \$100....	\$1 42

In conclusion, I would urge the more definite location of the line between this county and the new County of Lake, as there is much difficulty experienced by the officers in ascertaining the true limits of their respective counties, and a number of the settlers have had their property assessed in both counties this year.

Enclosed please find my statistical table, which, if not literally correct, I hope is near enough for all practical purposes, and trusting, at least, that it will meet with your approbation,

I subscribe myself, yours respectfully,

JAMES McCAULEY,
Assessor of Yolo County.

ANNUAL REPORT

OF THE

Surveyor-General of California,

FOR

THE YEAR 1862.

BENJ. P. AVERY.....STATE PRINTER.

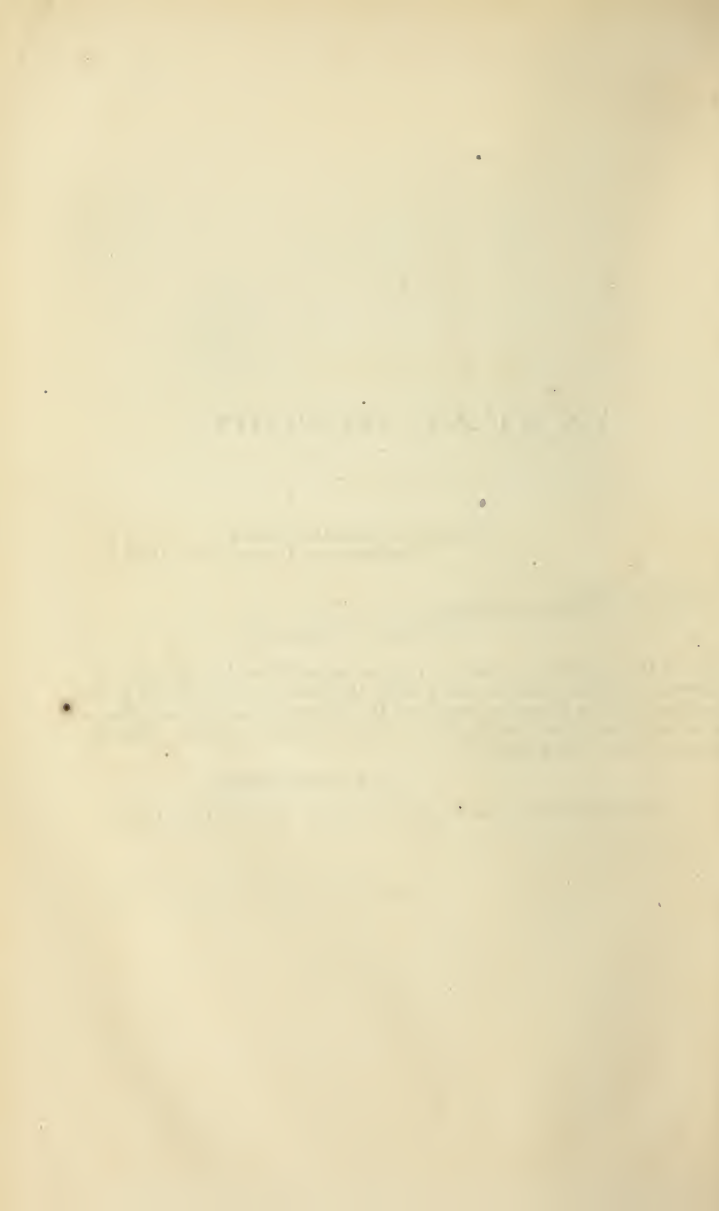
ANNUAL REPORT.

SURVEYOR-GENERAL'S OFFICE,
Sacramento, December 15, 1862. }

To His Excellency,
LELAND STANFORD,
Governor of California :

SIR:—In compliance with the requirements of the Act defining the duties of the Surveyor-General, I have the honor to submit, for your consideration, the following report of the Surveyor-General and Register of the State Land Office, for the year ending December fifteenth, eighteen hundred and sixty-two.

J. F. HOUGHTON,
Surveyor-General, and ex officio Register of State Land Office.



REPORT.

STATE LANDS.

I know of no subject more appropriate for the commencement of the Annual Report of the Surveyor-General and Register of the State Land Office, to whom, among others, is intrusted the important duty of administering all the various laws for the survey and sale of the State lands, issuing and keeping records of all titles issued by virtue of such laws, than a concise history of the several grants of land made by Congress to the State, showing the amount of land of which the State is proprietor, the nature of the title which she has derived, and consequently, the value of the title which the State is giving and offering to all such as have purchased or may desire to purchase under her laws.

The largest and most important grant made to the State is that of March third, eighteen hundred and fifty-three, which grants to the State for school purposes the sixteenth and thirty-sixth sections of every township in the State, or one eighteenth portion of the whole area of the State, which area being estimated at one hundred and ninety thousand square miles, gives six million seven hundred and fifty-five thousand two hundred acres as the amount of this grant, which is, by the Act of donation, irrevocably pledged to the support of Common Schools.

Next in importance to the sixteenth and thirty-sixth section grant, is the grant of all the Swamp and Overflowed Lands within the borders of our State, by Act of Congress of September twenty-eighth, eighteen hundred and fifty, by the terms of which the proceeds of sales are to be applied exclusively, as far as may be necessary, to the purpose of reclaiming said lands by means of levees and drains. The amount of this grant I estimate to be about one million five hundred thousand acres.

This grant is absolute, without any restrictions regarding the manner of sale by the State authorities.

The next grant in order of importance is the grant of five hundred thousand acres, which amount of land was, by Act of Congress of September fourth, eighteen hundred and forty-one, granted to each new State that shall "hereafter be admitted into the Union, upon admission." This grant was originally made by Congress for purposes of internal improvement, but was by our Legislature devoted to school purposes, and is generally known as School Lands.

Selections made under this grant were, by the wording of the grant, to be made as the Legislatures of the several States should direct.

The law of Congress of March third, eighteen hundred and fifty-three, in addition to the sixteenth and thirty-sixth section grant, also donates to the State seventy-two sections, or forty-six thousand and eighty acres, for the use of a seminary of learning, to be selected by the Governor, or any person he may designate for the purpose, and to be disposed of as the Legislature may direct.

And still, in addition to the above, the same law donates ten sections, or six thousand four hundred acres, for the purpose of erecting the public buildings of this State, to be selected by the Governor, or any persons he may designate.

In all except the sixteenth and thirty-sixth section and the Swamp Land grants, we are restricted by provisions in the grants, from selecting or locating on mineral lands.

The amount of land which has become the property of the State by these grants, may be summed up as follows :

State Lands.	Acres.
Sixteenth and thirty-sixth section grant.....	6,755,200
Swamp Land grant.....	1,500,000
Grant for internal improvement.....	500,000
Grant for seminary of learning	45,080
Grant for public buildings.....	6,400
Total.....	8,807,680

To which may be added the Tide Lands belonging to the State by virtue of her sovereignty, of the amount of which no proper estimate can be made.

SCHOOL LANDS.

In the Act granting the sixteenth and thirty-sixth sections, no reservation is made of those sections, when they occur in the mineral districts, (see section six of said Act,) as will be seen by a careful reading of the law, the whole grant being embodied in these few words: "With the exception of sections sixteen and thirty-six, which shall be, and hereby are, granted to the State for purposes of public schools in each township."

Whether it was the intention of Congress to include mineral lands in the provisions of this grant, I know not, but the effect of the above wording seems clearly to do so. Some doubt existing as to the intention, no selections or sales of mineral lands have been made by the State.

This grant including these sections in the mineral districts, as was before shown, amounts to about six millions seven hundred and fifty thousand acres, and will furnish the basis of a public school system second to none in any State of the Union.

Section seven of said Act provides that when the sixteenth and thirty-sixth section is covered by a private grant, or has been taken for public uses, the proper authorities of the State shall select other lands in

lieu thereof. The sections making this grant, occur in a law treating generally of unsurveyed lands, without any restrictions that the selections should be made upon unsurveyed lands. The Legislature of this State, properly understanding the Act of donation, regarding it as an absolute present grant, requiring only the selection by the proper authorities of the State and notice to the United States Registers of such selection, passed various Acts authorizing the sale and location of such lands upon any part of the public domain, surveyed or unsurveyed, requiring affidavits from the purchaser, and two witnesses that the lands sought to be purchased were unoccupied and unimproved except by the applicant.

These affidavits have been required of all purchasers of these lands, in order to guard against frauds or conflicts with settlers, the object being to take none but such as are absolutely vacant.

The authorities at Washington have long been made acquainted with this method adopted by the State, of selecting these lands, and no positive objection has been made to it, until within the past few months the Commissioner of the General Land Office at Washington has notified the Register of the United States Land Office for the Stockton District, that the State authorities would not be allowed to make selections of unsurveyed lands, which instructions the Register communicated to this office.

Either the Legislature and authorities of this State or the Commissioner of the General Land Office is wrong, and in view of the fact that the State has selected and sold to bona fide purchasers, in good faith, upwards of three hundred and forty thousand acres of unsurveyed lands, taken their money, and promised them good titles, I deem it of the utmost importance that a test of the law be made by a case in point being submitted to our highest tribunal, or that our delegation in Congress be instructed to obtain the passage of a bill defining the rights of the State in its selection of public lands donated to her, or explanatory of the laws already in existence, keeping in view the facts of the sales already made, and confirming them, except where they interfere with the rights of settlers acquired before the State notified the United States Register of such selection.

An anomalous condition of the public lands exists in this State, such as never before occurred in any State of the Union.

Owing to the existence of a large number of unlocated floating Mexican grants, embracing within their exterior limits nearly all the desirable agricultural lands within the easily accessible portions of the State, the precise locality of which, in many instances, remains to this day undecided, it has been impossible to determine what was the public domain, and the United States survey of the public lands has consequently been delayed until our rapidly increasing population has always been in advance of the surveys, and settlers have been compelled to locate upon the lands as they found them, whereas, in any other State in the Union, surveys have always been in advance of population. Our delegation in Congress should, in view of these facts, urge liberal appropriations for public surveys, that our settlers may immediately obtain their titles, as nothing tends so much to the prosperity of any country, as the certainty and security of its land titles.

If any measure can be adopted in Congress to compel the speedy location of the numerous confirmed Mexican grants in our State, our delegation should give it their attention and earnest support. The difference in construction of the law of Congress by the State and United States

authorities above referred to, was first brought to my notice in May last, through a letter written by Mr. Hubbard, Clerk in the Marysville Land Office.

I immediately addressed our delegation in Congress on the subject, which letter I herewith submit. It was so late in the session when it reached Washington that the suggestions contained therein could not be fully attended to, and Mr. Phelps informed me the letter was filed with the Commissioner of the General Land Office :

STATE OF CALIFORNIA, OFFICE OF SURVEYOR-GENERAL, }
Sacramento, May 8th, 1862. }

Hon. T. G. PHELPS, M. C.,
Washington, District Columbia :

DEAR SIR:—Allow me to call your attention, and through you, the attention of our entire delegation in Congress, to the following important extract of a letter written by Mr. C. V. D. Hubbard, Clerk of the United States Land Office at Marysville, in reply to a letter of inquiry from the State Locating Agent of the Marysville District, to wit :

“Your question as to what rights are allowed to be made against the State’s application, after it is filed in this office, it seems to me to be quite general. However, I will try to answer it. If the State files an application upon unsurveyed land, either for school warrant location, or in lieu of sixteenth and thirty-sixth sections, when the maps are returned to this office of such land, the State must renew her application immediately, and after the expiration of three months from the date of filing of maps the selection will be approved, upon its appearing that it interfered with no pre-emption rights vested before the return of the map.

“It will be the unvarying rule in this office, I believe, to protect pre-emptors in good faith in their interests as against the State in all classes of lands, surveyed or unsurveyed, and a satisfactory showing of pre-emption right to the officers here will always, I believe, be sufficient to defeat the State selection.”

You will readily see that if the above opinion is sustained at the General Land Office at Washington, the large number of purchasers of these lands from the State, *unless they have taken actual possession* of and occupied the lands so purchased, have acquired no rights whatever as against any person who may, at any time before the filing of the maps of township surveys in the local Land Office, desire to file his declaration of intention to hold the same land by pre-emption.

I beg leave to refer the delegation to the Act of March third, eighteen hundred and fifty-three, and the Acts amendatory thereto, by which it will be seen that by the original Act no pre-emption rights could be acquired upon any unsurveyed lands, except within one year after the passage of the Act, or before March third, eighteen hundred and fifty-four, which I think was by subsequent amendments extended to eighteen hundred and fifty-six, at which time all pre-emption rights upon unsurveyed lands would be held valid, and *no more could be acquired*. By section seven of said Act, you will see that where the sixteenth or thirty-sixth sections have been covered by private grants, or otherwise disposed of, *“other land shall be selected by the proper authorities of the State in lieu thereof.”*

Under this showing, pre-emption rights could not be acquired upon unsurveyed lands since eighteen hundred and fifty-six, but the State authorities are by the same Act authorized to select any unoccupied sur-

veyed or unsurveyed lands in lieu of the sixteenth and thirty-sixth sections granted or otherwise disposed of, and this opinion from the local Land Office, which I believe is held by all the Registers throughout the State, is contrary to the law, wholly wrong, and is now working incalculable injury to the land titles of our State.

In view of these facts, it is very desirable that the General Land Office should be requested to instruct the several Registers of the local Land Offices of this State, to the following effect, to wit:

That whenever the proper authorities of the State shall file with the Register of the local Land Office of the United States, their application for any surveyed or unsurveyed and unoccupied public land, in part satisfaction of any of the several donations made by Congress to this State, which application shall be accompanied by proper affidavits showing that the lands sought to be purchased are unoccupied and unimproved except by the applicant, it shall be the duty of said Register to accept such application in part satisfaction of said donation, and thereafter he shall allow no pre-emption to the same lands, or in any other way interfere with the right of the State to dispose of the same.

Considerable tracts of land were located by school warrants upon unsurveyed lands as early as eighteen hundred and fifty-two, in part satisfaction of the five hundred thousand acre grant, which lands are still unsurveyed, and selections are daily being made in lieu of sixteenth and thirty-sixth sections, and purchasers believe they are getting good titles, purchasing in good faith, yet the Registers of the different Land Offices will recognize no such selections, and allow pre-emptors to locate them after notice of the State selection.

Difficulties will multiply, and cause much trouble and insecurity in titles, unless some such instructions as I have indicated are sent to the several Registers.

The State has sold of the five hundred thousand acre grant, and the sixteenth and thirty-sixth sections, or lands in lieu thereof, about eight hundred thousand acres, and it is absolutely necessary, in order to protect purchasers in good faith, that such instructions should be given.

Will the delegation please give this subject the immediate attention which its importance demands?

Respectfully, your ob't. serv't.,

J. F. HOUGHTON,
Surveyor-General and Register of State Land Office.

To the Congressional Delegation of the
State of California, Washington, D. C.

P. S.—I enclose a blank of the form of application and affidavits filed with the United States Registers in all sales by the State under the present law.

J. F. H.

SEMINARY AND PUBLIC BUILDING LANDS.

These lands have invariably been selected from surveyed lands, and consequently no such difficulty has been experienced as with School Land locations upon unsurveyed lands. All selections under these grants have been unconditionally accepted by the United States Registers, except in a very few cases where township plats were not on file in their offices.

SWAMP LANDS.

There is no question between the State and the United States in regard to the title to the larger portion of this grant; yet, as will be seen by reference to the Swamp Land tables accompanying this report, the State has already sold forty-three thousand acres as Swamp Land, which is claimed by the United States.

This is partly accounted for from the fact that the Act of eighteen hundred and fifty-five, providing for the sale of Swamp and Overflowed Lands, required no affidavit as to the character of the lands, and as persons purchasing under it could hold three hundred and twenty acres, much was located which was left out in the segregation returns; and partly from the fact that there has been no concert of action between the United States and the State authorities in regard to establishing the line of segregation.

The United States surveys are usually made in the dry season, and no testimony is taken by the Surveyors to establish the character of the land in eighteen hundred and fifty, the date of the grant, between which time and the time of the survey, in many instances, tracts of land have been reclaimed and rendered fit for cultivation, by means of levees, drains, stopping the mouths of sloughs, etc., which they have returned as high land. This is particularly the case along the banks of the Sacramento.

Our State Surveyors, on the contrary, are required by law to procure affidavits of reputable witnesses as to the character of the land at the date of the grant, based upon actual knowledge, or reliable indications, taking observations for a series of years for information.

In only two or three counties have State Surveyors accompanied the United States Surveyors when surveying townships bordering on or including Swamp and Overflowed Lands; consequently two lines of segregation have been established, differing very materially—that of the State invariably including the largest amount of Swamp Lands, from the various and obvious reasons above given.

The importance of immediately establishing the segregation line cannot be over estimated. It matters but little whether the State gets a few thousand acres more or less of this land, but it matters much if titles must be delayed for years, and conflicts in titles must continue near the line until it is established.

Segregation surveys were returned last year from Sacramento, San Joaquin, Placer, Colusa, Yolo, Monterey, Humboldt, Sonoma, Solano, Napa, Lake, Santa Clara, and Alameda Counties. With the view of having these lands certified to the State, I have furnished the United States Surveyor-General with the segregation maps and certified copies of all the Swamp Land affidavits on file in this office. He reports that in consequence of a material reduction in the clerical force of his office, he cannot give the matter the attention its importance demands; and on communication with the General Land Office, he informed me that the Commissioner required the original affidavits, which will be furnished him whenever he can attend to them, and the copies retained here.

In order to settle all these difficulties, the United States Surveyor General should be authorized by Congress to appoint a competent Surveyor, who should, in connection with a similar appointment by the authorities of this State, define and mark the segregation line in all cases where conflict arises.

During the present year a supplemental segregation survey has been returned from Yolo County, including that portion of the Swamp Land included in the Knight' Grant, recently rejected by the United States Supreme Court. A segregation survey has also been returned from San Bernardino County this year, embracing twenty-eight thousand four hundred acres. In consequence of errors and informalities in the papers, the last mentioned survey has not been approved.

Considerable quantities of Swamp Land occur in Contra Costa, Merced, Fresno, and Tulare Counties, which have not been segregated by the State. In Tulare and Fresno the Government lands bordering on the swamp have been surveyed and the segregation line established. The County Surveyors have reported that it was properly done, and no change necessary.

In Contra Costa and Merced surveys should be made.

However perfect the title of the State may be to these lands, persons holding the State title would feel more secure in making permanent reclamations provided they were fully assured by the State that such reclaimed lands would not afterward be surveyed as United States lands, as has been done in instances referred to.

It will be seen by the accompanying tables that the total amount of Swamp Land segregated and approved is one million eighteen thousand one hundred and sixty-six and eighty one-hundredths acres, leaving about five hundred thousand acres yet to be segregated, of which about one hundred and fifty thousand acres is estimated to be in Contra Costa, and quite valuable.

Sales of these lands have been made during the past year to the amount of fifty-six thousand and forty-two and three-tenths acres, a quantity sufficient to show that much confidence still exists in the value of this class of State lands.

The work of reclamation was, by the Act of May thirteenth, eighteen hundred and sixty-one, creating the Board of Swamp Land Commissioners, intrusted to them, and the amount of land reclaimed will probably be found in their report. Many parcels have been reclaimed by private enterprise, and I think it would be well for the Legislature to encourage this method of reclamation, when well done, by refunding to the party so reclaiming a large proportion of the purchase money, as contemplated by the Act of Congress making the donation. I have personally inspected a levee constructed this year, by Mr. V. Hathaway, to reclaim two hundred and fifteen acres of Swamp Land, on the east bank of Napa River, above Suscol Ferry. A substantial levee and ditch has been constructed from one point of high land to another, crossing sloughs, requiring, in one instance, an embankment sixteen feet in height, in which has been placed a sluice with a flood or tide gate. A most remarkable crop of plums was gathered this year from trees growing upon this piece of Swamp Land, nothing more being required than a small load of earth to each tree, dumped upon the marsh, and the tree set in it.

Arrangements have been completed, by private enterprise, for constructing the necessary levees and drains to reclaim, in a permanent manner, a body of some sixteen hundred acres at Collins' Landing, near the mouth of the Sacramento.

Large tracts of Swamp Land have been sufficiently reclaimed for pasturage, by the purchasers, in the vicinity of Suisun City, Solano County. Considerable tracts upon the large islands near the mouths of the Sacramento and San Joaquin, and upon the banks of these rivers, near the mouths, have been partially reclaimed for cultivation and pasturage.

Along the banks of the Sacramento private enterprise is constructing considerable embankments. The effect, in every instance which has come under my notice, of keeping the water away from those tracts of Swamp Land which border on the tide waters of San Pablo or Suisun Bays, or near the mouths of the rivers discharging into them, has been, after pasturing for a single season, a rapid dying out of the samphire and tule, which are the natural growth of these Swamp Lands, and a spontaneous growth of clover, which is first observed growing from the sod thrown up from the ditch, and rapidly extending over the surface, as the water is kept off, and the other growth killed by the tramping of stock. Where the seed comes from is a mystery, but the fact proves the peculiar adaptability of these lands to the growth of grasses, which crop, in point of value, exceeds every other in the United States.

In cases in this State, when Swamp Lands have been sufficiently reclaimed to produce any of the cereals, the yield has generally been about double the amount per acre which the uplands produce, and throughout the world, when thoroughly reclaimed, this class of lands is regarded as much more valuable than uplands, in consequence of the greater fertility of soil, and greater abundance of crops, which can generally be grown several times in a single year.

A similar condition of lands exists to a small extent in southern Europe, in the Italian States of Lombardy, Sardinia, and Tuscany, through which run innumerable small rivers, fed by the melting snows of the Alps. These rivers in summer become mountain torrents, rapidly rising and falling with the melting snows, and their waters, like the waters of our own rivers, become densely charged with earthy and vegetable matter. By a well regulated system of warping, these waters are allowed to frequently overflow and recede from the Swamp Lands near their mouths, leaving the deposits upon the surface, until the whole is sufficiently raised to be easily reclaimed by levees, after which, by a most perfect system of canals, the river water is used for irrigation, making the land the most fertile in the world; in some instances cutting five crops of hay, amounting in the aggregata to twenty tons per acre per annum.

This yield seems almost incredible, but the fact is too well authenticated to be disbelieved, and in view of it indications are that eventually our reclaimed Swamp Land will be by far the most valuable in the State, and the Legislature should offer every possible inducement for its early reclamation. The method of reclaiming Swamp Lands mentioned above, by warping, or a deposit from the overflowed waters, was mentioned in the last annual report of the County Surveyor of San Joaquin, Mr. George E. Drew, which is deserving attention.

Experiments are yet in their infancy; the plum and quince, and all kinds of grain and grasses, are known to thrive in greatest perfection upon it, and it is believed that rice, sugar, and tobacco, will do equally well.

For information concerning the amount of sales, returns, conflicts, etc., of these lands, you are referred to the accompanying tables.

Patents have been issued during the year for twelve thousand and fifty-five acres of Swamp Land. In view of the fact that but very little, if any, of the Swamp and Overflowed Land has been reclaimed under existing laws, which would indicate a deficiency in the laws themselves, it might be well for the Legislature to authorize the selection of some easily reclaimed district, and authorize its reclamation by use of the funds now to the credit of the Swamp Lands in the State Treasury, and

after reclamation, authorize the assessment and collection of the whole cost, (less the amount paid in by that district as purchase money,) upon the land so reclaimed. If this was found to work well, as I think it would, it could be repeated until the whole is reclaimed.

It would certainly be very beneficial for the State and for individuals owning such lands to authorize such reclamation, assessment, and collection, in all cases where a majority, or say, the owners of two thirds of the lands embraced in any one district, should petition for such method of reclamation.

Without such a law, the owners of a few acres, by refusing to join in a general plan of reclamation, may, and now do, prevent the reclamation of large districts. I know of one large district which the owners assure me would at once be reclaimed could such a law be passed. In this district a few owners refuse to pay anything towards the cost of reclamation, hoping, perhaps, that their neighbors will do it without their aid, and they will reap the benefit without cost, and consequently, the whole tract, which might be rendered fertile and productive, setting an example worth more than its cost to other owners and the State, still remains a barren waste.

Contracts for this reclamation, or construction of levees, drains, etc., should be open to public competition.

This work, once inaugurated, would increase with every year, furnishing employment for a large number of our laboring classes at any season of the year when other employment might not be obtainable.

Reference is made in the above article on Swamp Lands to the difference between the lines of segregation as run by the State and by the United States.

The following list will show the whole amount embraced within the State line of segregation as Swamp Land, which has been returned by the United States Surveyors as high land :

Counties.	Acres.
Sacramento County.....	9,797.62
Sutter County.....	22,241.74
Colusa County.....	15,069.72
San Joaquin.....	1,600.00
Yolo County.....	35,830.00
Total.....	84,539.08

In Sacramento County, the State has sold, under the Act of eighteen hundred and fifty-five, five thousand one hundred and twenty-five and ninety-five one-hundredths acres as Swamp Land, which lies outside of the segregation line as run by the State Surveyors.

In Yolo County, seven thousand four hundred and eighty acres, and in Colusa, one thousand nine hundred and fifty and forty-four one-hundredths acres, were sold before the line was run, which proved to be outside the line, and nearly all such locations have been abandoned and the payments in some instances applied to other purchases as provided by law.

TIDE LANDS.

The question of the State title to these lands has never been raised, and the amount sold during the year is:

In What Year.		Acres.
Mendocino County.....	224.01	
Alameda County.....	29.44	
Total sold during year		253.45
Total sold during year 1858.....	302.64	
Total sold during year 1859	985.63	
Total sold during year 1860.....	746.60	
Total sold during year 1861.....	480.00	
		2,514.87
Total sold to date.....		2,768.32

STATE LAND FUNDS.

I beg leave to call your careful and earnest attention to the confused condition in the State Treasury of the several Funds, arising from the sale of State lands. By the several Acts of Congress, donating to this State the Swamp Lands, (the sixteenth and thirty-sixth sections,) the Seminary Lands, and the Public Building Lands, the disposition to be made of the moneys arising from the sale of such lands is clearly indicated, and in order to carry out the spirit of the Acts of donation, it is absolutely necessary that a separate Fund for each class of lands should be kept, which would at any time show the exact amount received from sales of each class.

The following statement will show the actual amount of money which has been reported to this office from all sources, as paid to the several County Treasurers on sales of School, Seminary, and Public Building Lands, compared with the amount in the several Funds, as shown by the books of the Controller:

<i>School Lands—(Balance of Five Hundred Thousand Acres.)</i>	
Amount received as principal, from July 1st, 1858, to December 6th, 1862.....	\$74,620 96
Amount received as interest.....	102,913 53
<i>School Lands—(Sixteenth and Thirty-sixth Sections.)</i>	
Amount received as principal, from July 1st, 1858, to December 6th, 1862.....	\$53,218 99
Amount received as interest.....	24,833 52
Total amount of principal on both classes.....	\$127,839 95
Total amount of interest on both classes.....	127,747 05

For which, the Controller's books show :	
Total amount of principal.....	\$127,487 92
Total amount of interest.....	124,712 81
<i>Seminary Lands.</i>	
Total amount of principal reported to State Register.....	\$13,155 68
Total amount of interest.....	12,359 41
	25,515 09
While the Controller's books show a total amount of principal and interest received from such sales, of.....	6,534 97
<i>Public Building Lands.</i>	
Amount reported to State Register as principal	\$2,124 71
Amount reported to State Register as interest	898 87
	3,023 58
Controller's books show total amount of principal and interest received, of.....	679 56

I have much reason to believe that a large number of payments of interest have not been reported to this office, from the fact that purchasers will not go to the expense of recording interest receipts, and consequently the Auditors cannot report them, and that the amounts shown above are not large enough; there is no possibility of their being too large.

The discrepancy in the Public Building and Seminary Lands is easily accounted for—County Treasurers will not learn to distinguish between these Lands and School Lands, and have frequently, I may say generally, given receipts to purchasers of these lands upon blanks prepared for School Lands, and doubtless have paid the funds into the State Treasury in the same manner.

For all this I propose a simple and efficient remedy, as follows: It should be provided that the Register of the State Land Office shall keep a set of books, which shall show the actual amount paid, both principal and interest, into each and every Fund arising from the sales of the State Lands by the several County Treasurers; that County Treasurers shall not be allowed to pay into the State Treasury, and the State Treasurer shall not be allowed to receive from the County Treasurers, any moneys arising from sales of State lands, except upon the certificate of the State Register, that the payments are correctly reported.

To accomplish this, County Treasurers should be required to forward to the State Register monthly certified lists of the names of the original purchasers of any lands upon which payments have been made, the dates, and amount of payment, whether for principal or interest, and the class of lands upon which such payments have been made, which shall thereupon be corrected by the Register, and credited to the account of the purchaser.

At the time of every settlement with the State Treasurer, the several County Treasurers should prepare a similar list, embracing all the pay-

ments so made up to the last of the month preceeding the date of said settlement, present the same to the Register for correction, who shall correct the same, and apportion the moneys to the several classes of lands, and certify to the correctness of the same. The County Treasurer shall then, upon the Controller's order, pay into the State Treasury such money, and take the State Treasurer's receipt upon the list aforesaid, and return it to the Register, to be charged to the respective Funds.

The books above referred to should be opened with the amount actually belonging to each Fund at the date of opening; to determine this, would require the careful examination and correction of every return made by the County Treasurers since the date of the first law for the sale of lands; authority for the Register to call upon County Treasurers for a large number of State Treasurer's receipts, which they have neglected to file in the Register's office, or in case of the loss of such receipts, for abstracts of their books showing the amounts so paid, from all of which the actual amount can be determined and entered. To collect and correct these returns, in most of which it is probable that payments have been credited to the wrong Funds, ample clerical provision should be made.

In San Joaquin, Humboldt, Calaveras, Tulare, and possibly one or two other counties, there has been in each county one defaulting Treasurer, by which the State has lost small amounts, but these amounts could not nearly equal the amounts which have been paid in and never reported to this office. Supposing, therefore, that the amounts paid into the State Treasury on School lands should be only equal to the amount reported to this office, as paid County Treasurers, and supposing the interest to have been all expended for the support of Public Schools, there should be at this time in the State Treasury, to the credit of the School Fund, the following sums of principal alone, viz.:

From sales of 237,760 acres of School Land Warrants, under Act of May 3d, 1852, at two dollars per acre.....	\$475,520 00
Sales of balance of 500,000 acre grant.....	74,620 96
Sales of sixteenth and thirty-sixth section grant.....	53,218 99
Total.....	\$603,359 95

Which amount, or more, should be in the State Treasury to the credit of the School Fund, as principal, either in bonds purchased under the Act of April twenty-third, eighteen hundred and fifty-eight, by the Board of Examiners, or in cash, and I suggest, as a member of the State Board of Education, that an examination be had to see if the funds are there. The actual amount paid to County Treasurers, or by them to the State Treasurer, cannot be correctly shown by the books of this office, until the method of reporting payments is changed, as above suggested, and then a complete check upon the correctness of the accounts of the State and County Treasurers, so far as State lands and the funds arising from their sales are concerned, may be found at this office.

SWAMP LAND FUND.

This class of lands is by County Treasurers confused with Tide Lands, and receipts are often given upon the latter as Swamp Lands, yet the total sales of Tide Lands to date is so small, being only two thousand seven hundred and sixty-eight acres, and Swamp Lands being so different from School, Seminary, and Public Building Lands, it is reasonable to presume that no serious mistakes would be likely to occur in the report of the fund arising from their sale.

The books of the Controller show that the amount paid into this Fund to December 6th, 1862, is....	\$312,536 57
Yet before the passage of the Act creating this Fund, there had been paid into the State Treasury from sales of Swamp Lands, the sum of.....	48,136 95
Not included in the above, and which should be restored to the Swamp Land Fund at once, even if borrowed the next day, for so far as the State Lands are supporting the State Government, so far should they have the credit of it, and as this fund is especially devoted to reclamation of Swamp Lands, the amount should fully appear upon the Controller's books. This would show a total derived from sales of Swamp Lands, of.....	\$360,673 52

For the purpose of adjusting and finally settling all questions relating to the title of all lands claimed by the State under the several Acts of donation by Congress, the Legislature at its last session, by concurrent resolution, appointed the Hon. William H. Parks a committee to proceed to Washington with such evidence of the State claims as was deemed necessary.

In consequence of this appointment, the usual correspondence of the Register of the State Land Office with the Commissioner of the General Land Office at Washington, in relation to the matters above named, has been suspended, awaiting the result of the efforts of this Commission, but will be renewed upon the return and report of the committee.

In order to still further assist in adjusting the titles of the State, a law was passed, at the last session of the Legislature, requiring the Register of the State Land Office to furnish to the committee appointed by the Legislature, such evidence as the committee may deem necessary, and also file with the proper United States officers a list of all the records in his office, showing the lands sold or claimed by the State, under the provisions of an Act of Congress making donations, together with certified copies of affidavits, etc.

In compliance with this Act, I prepared certified copies of all the Swamp Land affidavits on file in this office, and forwarded them to the United States Surveyor-General at San Francisco, together with the original segregation maps, which are constantly in use in this office, and have been returned. Certified copies would have been furnished him, had the clerical force of the office been sufficient to prepare them.

I also prepared certified lists of every other class of land claimed under

the different grants, each under its appropriate head, and forwarded them, together with the necessary instructions, to the committee at Washington, giving particular attention to the points in controversy between the United States and State authorities. To guard against accident by loss, duplicate copies were sent by the succeeding steamer.

The progress made in the settlement of these titles, will be found in the report required of the committee by the concurrent resolution.

STATE LAND LAWS.

The various laws providing for the disposition of the State lands are found in their application, in some instances, to work inharmoniously, and I would recommend many amendments, or the repeal of all existing laws, and the passage of one general land law, embracing all that is valuable, and leaving out all that is objectionable, in the present laws, and adding much that is desirable.

Section four of the Act to provide for the sale of the Swamp and Overflowed Lands of the State, approved April twenty-first, eighteen hundred and fifty-eight, and also section six of the Act of April twenty-third, eighteen hundred and fifty-eight, providing for the sale of the School Lands, provide that if any purchaser of either Swamp or School Lands shall fail to pay interest or principal when due, he shall forfeit all payments he may have made, and all right, title, claim, or interest, to said lands, and the same shall be resold, as though no sale had been made.

Entertaining a doubt as to the legality of this summary method of divesting parties of rights who had approved certificates of location, or approved surveys, and had made partial payments, I addressed a communication to the Attorney-General, asking his opinion, which, when rendered, was confirmatory of my own, that such purchasers had acquired such a title to the land that they could not be divested of it, or ejected, except by some court of competent jurisdiction, in a proceeding of foreclosure.

For the better protection of subsequent purchasers of these lands, I recommend that some steps be taken to divest of title all who were declared to have forfeited by the law previous to the Act of April ninth, eighteen hundred and sixty-one, providing for the annulling of certificates of purchase. It would be well to provide that whenever any purchasers, under a credit, desires to abandon a location or entry of public lands made by him under any land law of the State, he shall do the same by acknowledgment and reconveyance of title to the State, upon a form to be furnished by the Register. He shall also return the certificate of purchase, and if the same has been lost, certify the fact in the same manner as though he desired to obtain a duplicate therefor. As in this case the relinquishment is for the benefit of the State, it would probably be necessary that the State should pay the Notaries' fees, and for this purpose, and for advertisements, etc., and for expenses connected with the various suggestions of these pages, it would be well either that the fees of the office should be permitted to be expended, or, what would, perhaps, be better, that provision for the purpose should be made in the contingent item for the offices.

Section fourteen of the Act of April twenty-first, eighteen hundred and fifty-eight, providing for the sale and reclamation of the Swamp and Overflowed Lands of this State, reading as follows: "Section fourteen—County Surveyors are hereby authorized to administer oaths." Some County Surveyors regard this as giving them power to administer oaths

in all cases, and if such was not the intention of the Legislature, it should be amended.

Section two of the present law, providing for the sale of Swamp Lands, requires that the applicant to purchase should make affidavit as to the character of the lands. It is recommended that the law be so amended that after the land has been segregated by the County Surveyor, the applicant need only testify that it is within the segregation, or so that the County Surveyor may certify that the land surveyed by him is within the line of segregation as established.

The original term of five years credit upon Swamp Lands has been extended, and no period is indicated by the laws at the expiration of which School, Seminary, Public Building, or Sixteenth and Thirty-Sixth Section Lands shall be paid for in full. The back of the certificates of purchase contain receipts for the second, third, fourth, and fifth years' interest, and for the full payment. In the cases of School Lands and Swamp Lands sold under the Act of eighteen hundred and fifty-five, the blanks for the payment of interest have been exhausted, and it is suggested that another blank should be printed, and attached to the certificates of purchase by the County Treasurer, to whom it should be furnished by the Register.

The various laws prescribing the manner in which payments of principal or interest upon School Lands shall be made known to the Register of the Land Office, all agree in requiring that the purchaser shall take a duplicate receipt from the County Treasurer, which duplicate the Auditor shall record and send a certified copy thereof to the State Register. This method is not happy in its working, for various reasons. There are three classes which are commonly known as School Lands, viz: the grant of five hundred thousand acres, the Sixteenth and Thirty-Sixth Section grant upon surveyed lands, and the same upon unsurveyed lands. These are constantly confounded by many of the county officers, and in some instances error, and in all loss of time and extra labor, grow out of the county officers using wrong blanks, and reporting payments upon one class which have been made upon another. The necessity for having a simple payment of a small amount of annual interest recorded by the County Auditor, with an accompanying expense of from one dollar to three dollars, is regarded as a hardship by many purchasers, and not without some reason. Many decline altogether to do so, relying upon their receipt from the County Treasurer as sufficient protection in the event of the State bringing action to eject them for apparent non-payment. Many others are entirely ignorant of the existence of the law; and as the fourth section of the Act of April eighth, eighteen hundred and fifty-nine, enables the Register to issue a certificate of purchase when he is satisfied, from the certificate of the Treasurer, that the money has been paid into the County Treasury, thus practically doing away with the requirements before specified, in the various laws, as to the manner of reporting payments and issuing certificates of purchase, it is recommended that a simpler, less oppressive and more effectual method be substituted; that the Legislature be recommended to pass an Act requiring the County Treasurer to give a receipt to the purchaser for the first payment, whether the same be for the full amount, or twenty per cent thereof, and interest on the balance; that when payments of annual interest are made, the County Treasurer shall indorse the same upon the back of the certificate of purchase, and enter the same, with the name of the party paying, upon his books, which shall be the only record required; that on the first day of every month, the County Treas-

urer shall make a return to the Register of the State Land Office, upon forms furnished him by the Register, showing the payments made during the preceding month, upon what class of land, whether first payment or interest, etc., the name of the purchaser, and the number of the survey or location; that upon the receipt of this return, it shall be the duty of the Register to credit the payments in the proper books, and in case of first payments, to forward to the County Treasurers the certificates of purchase to which purchasers have become entitled. It may be suggested that the quarterly returns by the County Treasurers to the Controller need only state the amounts received for each description of land, and the reports be thus greatly reduced in volume, and freed from the mass of detail of names of purchasers, etc., only useful to the Register, to whom the returns are not now made.

In the event of non-payment of interest due upon lands purchased of the State under a credit, or the said payments not appearing upon the list returned by the County Treasurer, the month after the same shall have become due, it shall be the duty of the Register to publish notice in the county newspaper, if there is one, or in the nearest published newspaper, if there is not, or to furnish to the County Treasurer printed notices for posting in public places, to the effect of the notice required by the law of eighteen hundred and sixty-one, relating to the annulling of certificates.

I beg leave also to call your attention to the fact that there is no law specifying the time which shall be allowed to County Surveyors to return to this office plats and field notes of surveys of lands for purchasers, after the application for such survey is made to them; the consequence is, that the simple act of filing an application to purchase either Swamp or School Lands has, in many instances which have come to my notice, secured those lands to the applicant for years without any payment whatever to the State, and, as in the case of both Swamp and School Lands, payments are not due and interest does not commence until, in the case of Swamp Lands, the survey is approved by the Surveyor-General, and in School Lands until the location is accepted by the Locating Agent, and the lands are not taxable to the individual until he has his certificate of purchase. The State is annually the loser of thousands of dollars, in interest and taxes, which would be saved provided the evils complained of were remedied. The importance of this suggestion can only be fully appreciated by those whose connection with this office has made them familiar with the magnitude of the evil. I would suggest that a law be passed compelling the County Surveyors to return all surveys within thirty days after affidavits or applications are filed with them, and in any county in which such evil exists, the Surveyor-General may appoint a competent Surveyor to make any or all surveys under the different State laws providing for the sale of State lands. Some exceptions might be made to this law in the case of Swamp Lands in an overflowed state, which should be left to the discretion of the Surveyor-General.

By the Act of April seventeenth, eighteen hundred and fifty, defining the duties of the Surveyor-General, he is made Chief Engineer and Commissioner of Internal Improvements, and is required to furnish to the Governor, annually, plans and suggestions for the drainage of marshes and prevention of overflows, etc. The most important work which may be embraced in the above duties, and which should be under the general supervision of this department of the State Government, is the segregation and reclamation of its Swamp Lands, requiring no inconsiderable skill and experience in engineering and land surveying.

By the Act of May thirteenth, eighteen hundred and sixty-one, creating a Board of Swamp Land Commissioners, this duty was taken away from the Surveyor-General and placed in the hands of five Commissioners, at a salary of one hundred dollars each per month, with authority to employ Engineers, etc. If a necessity existed at all for the creation of this Board, I submit, with all due respect for the gentlemen who comprise it, that a proper regard for the interests of the State should have suggested the appointment on such Board of at least one Engineer of experience in such work, competent to judge of the qualifications of the Engineers they employed to superintend their works of reclamation, and of the quality of the work when done.

This Board has been in existence one year and eight months, and has expended for surveys and salaries upwards of sixty thousand dollars from the Swamp Land Fund, and it is for the Legislature to say if the State has received a corresponding benefit in the amount of land reclaimed.

However good the laws for the reclamation of the Swamp Lands may be, the present method of administering them through the Board of Swamp Land Commissioners is too expensive, and the Fund is in danger of being exhausted in salaries and expenses before much land is reclaimed.

I would suggest, instead, that a Bureau of Swamp Lands be established, in connection with the Surveyor-General's office, the head of which should be appointed by, and be under the general supervision of the Surveyor-General, and be styled Chief of the Bureau of Swamp Lands, who should be a practical Engineer, and Surveyor of experience in hydraulic works, who should perform, under the direction of the Surveyor-General, all the duties, with some modifications, required of the Board of Swamp Land Commissioners, and also, in person, all the duties required of the Engineers which the Commissioners are authorized to employ.

An Engineer, with a salary of two hundred dollars per month, with some allowances for contingent, travelling, and other expenses, would perform all the duties enumerated above, equally as well as the present Board possibly could do.

Some action of the Legislature is necessary to provide for the purchase of blank books for the State Locating Agents. The form books required by them are quite expensive, in some instances costing seventy-five dollars. In one instance brought to my notice, the former Locating Agent refuses to deliver up such books to his successor, on the ground that they are his private property, purchased with his own funds. In some instances, County Surveyors, in consequence of the failure of the last Legislature to provide them with copies of township plats in their counties, have purchased them with their private funds, and regard them as their private property.

By the recent amendments to the Constitution, the sessions of the Legislature will, after the coming session, commence in December, rendering necessary a change in the time allowed for the Surveyor-General to hand in his report to the Governor. I suggest that the report should be made up to the close of the fiscal year, June thirtieth, and that he be required to hand it in to the Governor at any time thereafter before the first of November, and if deemed necessary, a brief supplemental report could be required, extending to a later date.

STATE BOUNDARY.

I beg leave to call your attention to the importance of determining the location of the eastern boundary of the State, particularly that portion lying north of Lake Bigler, and running near Honey Lake Valley, at present containing a very considerable population; and that part south of Lake Bigler, and running directly through the rich mining district of Esmeralda, very near the town of Aurora.

Much difficulty has already been experienced by Assessors and Tax Collectors, as will be seen by reference to the report of the County Assessor of Plumas County, to which your attention is called, and much revenue lost to the State in consequence of the uncertainty of the location of this line, which will be multiplied as the question of judicial jurisdiction arises, which will assume still greater importance with the rapidly increasing population and wealth of those districts.

It may be well, in connection with this subject, to refer to the Act of Congress defining the western boundary of the Territory of Nevada, which makes the northern boundary of the Territory of New Mexico the southern boundary of Nevada, extending it due west until it reaches the "dividing ridge separating the waters of Carson Valley from those that flow into the Pacific ocean, thence on said ridge northwardly to the forty-first degree of north latitude, thence due north to the southern boundary of the State of Oregon;" provided, the State of California shall assent to the same by an Act irrevocable, etc. As the question of adoption of this line was before our Legislature at its last session, and may be again, I give herewith, in brief, the effect of such adoption. Goose Lake, Honey Lake and Valley, Lake Bigler, and Lake Valley, the Esmeralda District, Mono District, and the northern part of Owens River, all now in California, would be thrown into Nevada Territory. The line thus established could be located by triangulation of the principal peaks, at less expense than the line as it now exists. The cost of running such line by contract with competent Engineers, and determining the longitude of the principal points by connection with the point established by Lieutenant Ives, near Lake Bigler, would be about twenty thousand dollars. The cost of locating the present line would require the location of the initial point on the Colorado, (that work never having been fully completed,) and one or two intermediate points, by astronomical observation, to determine their longitude, at much greater cost.

Governor Nye, in his last Annual Message to the Territorial Legislature of Nevada, refers, in forcible language, to the difficulties, present and prospective, which are certain to grow out of the uncertainty of this boundary, and recommends a joint Commission of the Territory of Nevada and the State of California, to establish and make it.

It remains with the Legislature of this State to determine whether the boundary suggested in the Act of Congress creating the Territory of Nevada shall be adopted, or whether it shall remain as was originally provided for this State.

In either case, I concur with Governor Nye in his suggestions for the appointment of the joint Commission for the purposes above named.

We have as yet experienced no difficulty with our northern and southern boundaries.

COUNTY BOUNDARIES.

The attention of the Legislature should be directed to the importance of definitely establishing and locating the boundary lines of every county in the State.

By reference to the reports of several of the County Assessors, it will be seen that considerable amounts of revenue are annually lost to the State in consequence of the uncertainty of location of boundary lines, and still greater difficulty arises out of the question of jurisdiction of courts and Sheriffs over the disputed tracts, causing endless litigation.

The most serious of these difficulties occurs in the line between the Counties of Napa and Solano, occasioned by the uncertainty of location of the starting point in the Guichica Creek, which should be more definitely described. A large number of suits for taxes have been brought by one county against persons who have paid in the other, and as the disputed tract embraces a considerable amount of the best agricultural land in the State, many suits have arisen out of the question of jurisdiction of courts.

This line was located in eighteen hundred and sixty-one by Mr. B. W. Norris, acting as deputy to my predecessor, but the Supervisors of Solano County, dissatisfied with the survey, have applied for a resurvey, which is not yet completed.

The eastern boundary of Lake County, between Lake and the Counties of Yolo and Colusa, is exceedingly uncertain, from the difficulty of determining the exact ridges mentioned in the law defining the boundaries, no well defined dividing ridge occurring among the many to be found in that vicinity. If this line was once located by authority, and then adopted by the Legislature as thus located, the question would be set at rest. I refer you to the report of the Assessor of Lake County on this subject.

The Assessor of Fresno County complains of difficulty of making a proper assessment, in consequence of want of knowledge of location of the county boundaries.

The Assessor of San Luis Obispo urges the importance of establishing the boundary between that county and Monterey, and remarks that very many persons in the vicinity of the line escape assessment altogether, and recommends that the line be run before the next assessment is made.

In the month of August a request was made by the Board of Supervisors of San Luis Obispo County to have this line run and marked. Answer was made to their communication, informing them of the manner of payment required by law, and a Deputy was selected to make the survey. No reply was made to my communication, and as their assessment was already completed for this year, I presume the survey was deferred until next year.

By an Act approved April thirtieth, eighteen hundred and sixty, the Surveyor-General was authorized and required to survey the boundary lines between Plumas and Shasta and between Plumas and Sierra Counties. Upon correspondence by my predecessor with the Boards of Supervisors of the said counties, they neglected or refused to make any provision for the expenses of such surveys, as provided by law, and the surveys have not yet been made. The County Surveyors of Sierra and Plumas have run a compromise line, entirely differing from that established by law, the adoption of which I would recommend, if satisfactory

to both counties, requiring the map and field notes to be returned to this office. The report of the County Assessor of Plumas makes complaint of the uncertainty of their boundary lines, and is deserving of notice. The line between Shasta and Plumas has not yet been run and marked.

As the State is largely interested in having these boundaries properly defined and located, that the assessment and collection of the State revenue may be properly made, and as the item of cost seems, in many instances, to prevent their being made, I would suggest that one half of the expense of such surveys be borne by the State, the other half to be paid by the county making the application; one half of the latter to be collected from the county or counties adjoining said line, by the county making the application.

DELINQUENT PURCHASERS OF STATE LANDS.

By the Act of April ninth, eighteen hundred and sixty-one, providing for the annulling of certificates of purchase, it is made the duty of the Register of the State Land Office to notify all purchasers of State lands who have neglected or refused to pay principal or interest when due, that if not paid within thirty days, an action will be commenced to obtain a decree of foreclosure of his interest in the land, and to annul the certificate of purchase; and it is also made the duty of the Register, if not paid, to notify the District Attorney of the county in which the land is situated, of such failure, who shall commence action, etc.

Upon examination of the books of this office at the time I assumed its duties, there appeared fifteen hundred and sixty delinquents, and notices, involving much labor, have been prepared and sent during the year to them all.

In a very large number of cases, evidence was immediately furnished the office that the payments had been made, but that the receipts had not been taken to the Auditor for record, consequently they had not been reported to this office, showing at once the impropriety, before mentioned, of the present method of reporting payments to the Register. Other apparent delinquencies, which were not real, were occasioned by the defaulting Treasurers of San Joaquin and Humboldt.

Still, a very large number came forward and made their payments, reducing the number of actual delinquents, as now appears by the books, to about one half the original number.

The time consumed in regulating the books so as to know who were actual delinquents, and the inadequate clerical force allowed the office, has prevented sending the required notices to the District Attorneys, which will be attended to as soon as possible.

The effect of the delinquent notices is observable in the increased amount of interest received into the State Treasury the present year on sales of State lands, being on School Lands alone, from January first to December sixth, eighteen hundred and sixty-two, fifty-one thousand three hundred and seventy-eight dollars and eighty cents of interest, against twenty-five thousand seven hundred and twenty-five dollars and sixty-two cents for the whole of eighteen hundred and sixty-one, and twenty-eight thousand four hundred and one dollars and fourteen cents for the whole of eighteen hundred and sixty.

Interest on Swamp Lands for the year eighteen hundred and sixty-two was remitted by the last Legislature, yet interest to the amount of eight thousand eight hundred and ninety-six dollars and seventeen cents has been reported to this office as paid this year, chiefly from delinquents who had received these notices.

CANALS.

By the Act of April first, eighteen hundred and fifty-seven, there was granted to the individuals comprising the "Tulare Canal Company," one half of all the Swamp Lands lying between the San Joaquin river, at Kings' River slough, and Tulare Lake, also, one half of all the Swamp Lands bordering on Tulare, Buena Vista, and Kern Lakes, and thence up to the lines dividing the said Swamp and Overflowed Lands from the lands of the United States, the said company taking all the odd sections, leaving for the State all the even sections of such lands; provided, said company should reclaim the lands by a system of canals, etc.

The Act making the grant was repealed in eighteen hundred and fifty-eight, since which time the State has sold of the odd sections about twenty thousand six hundred acres.

The Act of April tenth, eighteen hundred and sixty-two, grants to the same parties named in the first Act, upon nearly the same conditions, the same amount of land, with the additional proviso, that where the State has sold any of the odd sections, the grantees should be allowed to select therefor four times the quantity thus sold, out of any Swamp Lands in that district.

Grant.	Acres.
The approximate estimate of the amount in the district to be reclaimed is about three hundred thousand acres, one half of which is granted for reclamamation, would be (less odd sections sold by State).....	129,400
Add for amount sold by State.....	82,400
Total amount of grant.....	211,800

The agent of the Company has filed in this office a list of selections, in lieu of the twenty thousand six hundred acres sold by the State, amounting to seventy-seven thousand nine hundred and twenty acres, which selections, together with the remaining odd sections, I have reserved from sale.

The construction of these canals in the manner contemplated by the law, would be of incalculable value to the State, by rendering highly productive a large tract, now valueless, and furnishing abundant facilities for transportation, and doubtless prove equally beneficial to the enterprising projectors, when completed.

The services of skillful engineers should be obtained in the construction of these canals, to prevent the too rapid discharge into the San Joaquin of the surface water of this great extent of country during the winter months.

DRAINAGE OF THE VALLEY OF THE SACRAMENTO.

I desire to call your attention to the expediency of a preliminary reconnoissance or survey of the country between a point on the Sacramento, above Knight's Ferry, and the tide waters of Suisun Bay,

about Denverton, west of the Montezuma Hills, with reference to the eventual construction of a canal between these points, for the drainage of the western portion of the valley of the Sacramento, and reclamation of the large body of Swamp Lands between those points.

Your present Surveyor-General has for many years been an advocate of the practicability of such canal, and it is believed by those most conversant with this section of country, that such canal, located as it would be throughout nearly its entire length, upon land many feet below the banks of the Sacramento river, would require for most of the distance nothing more than two simple ditches and embankments, at a distance say of half a mile apart, to give direction to the current and collect the waters of the various streams which rise in the Coast Range and discharged into the great Swamp Land basin on the west bank of the Sacramento. It is a matter of much doubt if the present requirements of the State would justify the expenditure necessary to construct such canal, but when our population has sufficiently increased, I have no doubt that a demand will be made for such a canal which will insure its construction. An expenditure of a few thousand dollars in a preliminary survey might develop facilities for construction which would justify immediate commencement, in view of the immense advantages to be derived.

During the past year a private survey was made by an Engineer of large experience in hydraulic works, with the object of taking the waters of Cache creek, (the outlet of Clear Lake,) from a point in the hills where it is an ever-living stream, and carrying them through a canal down over the arid plains of that portion of Yolo County, for purposes of irrigation.

The survey proved the entire practicability of the plan. Many persons signed a bond agreeing to take water for a certain number of acres each, at the rate of one dollar per acre per annum, nothing to be paid until the water was furnished. A large number of others, fully acknowledging the value of the water to be ten times greater than the amount charged, refused to sign any obligation, for want of which the necessary financial arrangements, which only awaited such an obligation, could not be completed, and the plan was abandoned.

Reference is made in the report of the County Surveyor of Yolo County to the practicability of irrigating these great plains by means of canals from the Putah and Cache creeks, which I think is deserving of legislative encouragement.

The following highly interesting article upon the subject of irrigation has just been received from William H. Bryan, Esq., the Engineer before referred to who projected the plan of the canal from Cache creek, showing the great advantages derived from irrigation wherever adopted, and its peculiar adaptability to the great plains of Yolo and Solano Counties. Nothing can aid so much in preventing overflows of that portion of the Sacramento Valley as this proposed diversion of the waters of Cache and Putah creeks :

LETTER FROM WILLIAM H. BRYAN, ESQ.

SAN FRANCISCO, }
December 11, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General :

SIR:—In reply to the suggestions made in your letter, I regret that I am not able to make any favorable report of progress in the project of works for irrigation, etc., as proposed by me to the farmers and land

holders of part of Yolo County last spring. I found the better portion of them both willing and anxious to accept the conditions proposed to them and to co-operate in the construction and use of the work; but unfortunately, there are in that section of the country many who do not appreciate the accumulated evidence we have of the extent and benefits of irrigation in other countries, or the results to their own neighbors, among whom it has been practiced with some success, though upon a small scale and in a rude and imperfect manner. I, however, regard the question of adapting and applying to a large portion of the plains of Yolo and Solano Counties an extensive system of works for irrigation, with, perhaps, transportation and water power, as one of time only.

I have not at my command, as I write, some valuable statistics which I have collected, of the canals of Italy and India, where the system of irrigation has been practiced for many centuries. I may say, however, that in Italy canals of irrigation are counted by thousands of miles, and the lands watered by them by millions of acres. The productive capacity and the rentable and marketable value of the lands generally are nearly doubled, and in some cases, increased tenfold.

In India, irrigation has been practiced by the natives for ages, but by means of badly planned and ill constructed works. Seeing the importance of better works for the proper developement of the resources of that country, the British Government have lately built the grandest work of the kind known to modern times. With its main branches, (all navigable,) it is over seven hundred miles in length. It was designed *chiefly for purposes of irrigation*, but is used also for water power and transportation. The volume of water which flows through it is immense, and the size of the canal is such that it is capable of floating vessels of greater tonnage than any which ply upon the Sacramento river. Though the cost was over seven millions of dollars, and the work has been but a few years completed, the profits, direct and indirect, derived from it by the English Government, amounts already to full twenty-five per cent per annum upon its cost. It is probable that each dollar invested in that great work will furnish water to irrigate forever one or more acres of land, and give employment and support to nearly as many India laborers.

The works of Italy generally grew up with the wants of the country. They were designed and built separately to answer a present need, and without reference to connection with and becoming part of a great system. They are generally small, and were so costly in construction that they have seldom been remunerative to the projectors, though of immense value to the consumers of the water. The great canal of India, on the other hand, has been planned and constructed upon a large scale, and with a view to the future as well as present wants of the country which it traverses. The consequence is that it pays well. This shows that the building of such works generally upon the largest scale practicable, is the most profitable to the owners, and the most economical to the consumers of water. The propensity of our farmers to make very small and, relatively, very costly *ditches* to irrigate mere patches of ground, instead of combining to construct canals capable of passing large quantities of water, affording them a constant and lavish use of it over the whole of their lands at very low rates, is one very great difficulty in the way of those who desire to introduce plans of works that will prove the most useful.

So great is the value of water for irrigation in Italy and India, that scarcely any revolution of trade, commerce, or government would be so oppressively felt as the destruction of their canals of irrigation, or as

even their suspension for a few years. Yet neither of these countries have a climate which calls so loudly for irrigation as California, and from all that I can learn of them, they do not possess, naturally, the same advantages for extensive and economical works of irrigation.

Irrigation upon a small scale has been already practiced in this State. The abuse of water, however, by excessive, untimely, and injudicious irrigations, has prejudiced many against its just and proper use. The scarcity and high wages of farm labor, the high rates of interest, and a general desire to cultivate cheaply the cereals, and to raise the common stock of the country, have heretofore prevented land holders from turning their attention to that system of small and neat farming which is the characteristic of a thriving country, and which will be very much promoted by irrigation. In a well irrigated country, farms of a hundred acres or under will probably be more the rule than the exception. Grass, which is the most valuable production of any country, may be kept green and flourishing throughout the year in many parts of California, yielding several crops of increased quality and quantity on the same ground. The cereals may be increased at least twenty-five per cent per acre, while the products of the dairy, the means of fattening, and keeping fat, stock for the butcher, and the opportunities for rearing fine stock, may be multiplied many times.

While my observation of the capacity and fitness of the valleys and plains of the State for irrigation have been only general, my attention has been specially directed to a few points. One of these is a scope of country lying west of Sacramento City, between the tule and the foothills, and in the vicinity of Putah and Cache creeks. This plain has a gentle and easy slope from north to south, and one somewhat stronger, yet gentle, from west to east. The general direction of its drainage is about east-south-east. The soil is all strong and rich, and the climate salubrious, though warm and dry. Putah and Cache creeks, draining a large region of mountainous country, cut this plain at right angles. They have both raised their banks higher than the adjacent grounds, and the overflow of both streams runs nearly north-easting and south-easting. Between the two, there are over one hundred thousand acres of land capable of being watered, of being much improved, and whose value would be greatly enhanced by such watering. Instrumental examinations have been made sufficient to determine the practicability of the project upon a large scale, and at a cost which will supply the farmers with water, when the whole is irrigated, at very low rates. An inspection of the ground south of Putah and Cache creeks has satisfied me that at least one hundred thousand acres more may be embraced in the work, and be profitably irrigated. The size of the main stem of the proposed canal must be such, and the current of water in it so gentle, that boats of heavy burthen could ply upon it. Several of its branches would furnish water power, while leading it on its way to the fields of irrigation, without any loss of volume.

Cache creek discharges through this country for more than half the year a large volume of water which is loaded with fertilizing matter. Heretofore it has passed on to waste, and to help to overflow the low lands bordering on the river, already too wet. Its sources of supply are abundant to meet any demand which may be made upon them. It is these waters which I proposed to divert and apply to useful purposes.

I am impressed with the belief that there cannot be found in the world any field of like extent so well situated for the proper application of water, where the benefits to be derived will be so great, and where

the necessary works can be so cheaply built, and consequently, where the water can, in time, be sold to the consumers at such low rates, as in that which I have described. It can be, and probably will be, made the garden of California. It is capable of supporting a larger population than any rural district in the Union. Its capacity for grass, as respects quality, quantity, and duration, especially fits it for dairy purposes—the products of which do now, and probably will continue to command high prices in this State. The ability of its farmers to keep their stock fat the whole year round, will give them a choice of markets for such as may be intended for slaughter. Stock of *fine* quality will take the place of the poor kind, because it will pay for being kept in inclosures, and being carefully tended. Farmers will be assured of a certain crop of cereals whether the season be very wet or very dry; for the more successful irrigation of the land renders profitable an extent of ditching and draining, the expense of which farmers will not incur with light or uncertain crops. Fruit trees and vines can be stimulated to full and early growth, while, with due care in the application of water, their fruits may be improved rather than injured, both in quality and quantity. The cultivation of live fences (hedges) will save a great and constant outlay of money, (exceeding the cost of the works proposed,) while the rapid growth of the more valuable timber trees will render their cultivation a source of profit. Considering the small proportion of the State likely to be improved in this way, in a short time, the certainty of paying crops in the irrigated district, and the probability of dense settlement, I am unable to see any reason why a very rapid rise in the value of property should not follow. That much of it would increase five-fold in as many years, I have no doubt.

The preceding is a hasty sketch of the outlines of my plan, its objects, and a few of its many advantages. The reference to the works of Italy and India was necessary to explain the superiority of large canals over small ditches, (though both are good in their way,) and to give some idea of the extent and magnitude of their works, *which are increased*, but never allowed to go down.

I will now explain “why the scheme has not been carried out.” The law allows water companies to collect from their works revenues sufficient to defray the expense of maintainance, and to pay a certain interest upon the actual cost of construction, etc. If all the land within the scope of the works proposed should be irrigated, the annual cost to each acre would be very small. But, during the time that water may be purchased to irrigate only a part, the rates per acre must be higher if the company look to prompt and full returns from the start. As the stockholders can receive *only their interest*, and no other profit, and as this is below the present rate in California, it is reasonable that they should desire to avoid any delay in its prompt payment. Under these circumstances, the conditions proposed to the farmers are, not to give money, nor to subscribe to that stock, (though they have that privilege,) but simply, that in any irrigable district where a branch of the work may be carried, they shall engage to be ready to use the water when notified that it is ready for delivery to them, to take and pay for it certain monthly rents, and that the number of them so engaging shall be sufficient to provide the revenue required. If all do this, they at once get the water at the minimum price. If part neglect or decline, those who do take the water will pay higher rates at first, but will have the benefits of the first reduction, while those who omit taking it at the opening of the work will gain nothing by the delay, but will pay the highest rates

whenever they do get water. This is only fair to those who give the first support to the work, and is no injustice to those who, from any cause, omit to do so at the earliest day.

There is a unanimity of sentiment among the farmers that water for irrigation should be supplied *in some* quantity, and at some rate, and that a supply, however small, would benefit them and enhance the value of their property. A number of them are now willing and anxious to secure it by paying two or three times the rates at which water would be sold when farmers use it freely, and the canal should be running full. The majority of them, however, seem to be unwilling to pay for water to irrigate all grounds, *grass land* as well as cultivated lands. This, which is the great value of irrigation, many of them regard as an experiment, and of doubtful utility. I have found it also difficult to convince them, that in countries where irrigation is practiced, the thirst for water is ever increasing; and that the demand for it soon exceeds the supply, except where the works have been planned with proper foresight; that every acre within the reach of water is in time irrigated; that the cost of providing works to supply the greatest demand of the country is much less, in proportion, than small ones to supply only a fraction; that the enlargement of such works, when built originally too small, is always attended with great inconvenience and expense; and that the more copious the supply of water at the outset, the more profitable will it be to them, and the soonest enhance the value of their lands.

If I build any work, it must be in accordance with these views.

The rate of interest allowed by law to stockholders in canals, is such as to attract capital to the work only as a safe and permanent investment, with assurance of regular dividends. These dividends, with the expense of maintenance, must be paid by *those who use the work*, but no more is required of them. If the revenue is too large, the company must reduce the rates. It is, therefore, the interest of the farmers using such works, that the capital should be invested at the lowest rates, the works be built and maintained at the lowest cost consistent with security and good management, and that the largest area of ground be brought under irrigation to furnish full revenue to the company at the lowest rate to the consumers. In short, if a work can be built where there is assurance of even ultimate returns, it is more the interest of the users than of the stockholders to build and maintain it at the least cost. This simple principle is what I find it most difficult to impress upon the greater number of the farmers of the district referred to.

Very respectfully, yours,

WM. H. BRYAN, Civil Engineer.

The subject of irrigation is of such importance in consequence of its peculiar adaptability, from climatic causes, to our own State, that I am induced to give it much attention.

The subject is new here, and, as like all new subjects, it will require time for discussion before the people will be prepared for its adoption, the sooner such discussion is commenced, the sooner will the desired end be attained.

The reputation and experience as a Civil Engineer of the writer of the following communication upon the subject of "The utilization of water, and its sources, in California," is the only apology for embodying it in this report. I desire to acknowledge my obligations to him for his prompt response to my request :

NAVY YARD, MARE ISLAND, }
December 30th, 1862. }

MY DEAR SIR:—Convinced of your deep interest in all that relates to the progress of California, and believing that the presentation of all views relating thereto cannot fail of eliciting your attention, and through you, on proper occasion, in your official connections, of being more widely disseminated so as to reach where their practical value is most likely to be determined, I have thought proper to send you the following paper touching the utilization of water, and its sources, in this State.

Very respectfully,

Your obedient servant,

CALVIN BROWN.

J. F. HOUGHTON, Esq.,
State Surveyor-General, California.

ON THE UTILIZATION OF WATER, AND ITS SOURCES, IN CALIFORNIA.

BY CALVIN BROWN, C. E.

In our whole Union, there is no section as yet distinctly incorporated that is related in so remarkable and peculiar a manner to the element of water, as California.

It is this obvious peculiarity, aside from mere geographical position and abundance of precious metals, that constitutes the chief difference, in a meteorological view, between this State and every other. Its seasons are distinguished, not by the ordinary terms of winter, spring, summer, and autumn, but by the terms "wet" and "dry," thus significantly indicating their connection with their producing cause, viz: the presence or absence of moisture. The great importance of this element in what has hitherto constituted the chief business of the country, viz: the production of gold and silver, gives it the highest position, as a means by which it has grown and prospered. It is the object of this paper to show wherein, and, to some extent, by what practical methods, its more extensive usefulness may be secured to other great interests of the State, as represented in agriculture, manufactures, inland navigation, the reclamation of lands, and their security from the disastrous consequences of floods.

The settlement and development of California have been undertaken by a people, strangers to the country, and originally accustomed to a climate and meteorology widely differing from those they found in their adopted home, and accordingly they have learned that these new conditions affecting so materially the interests it is their object to establish, seem to demand an entirely different economy in many important respects than that heretofore practiced by them. Especially have they found the long droughts of the "dry season" an inconvenience that, in their former localities, would have been almost insupportable, and would not have been endured if any means of remedy could have been discovered. The residents of all dry countries, including those visited only by periodical rains, like our own State, for centuries have practiced the utilization of water with the most careful economy, from such sources as fell within their reach, and without which practice, many of these coun-

tries would have remained uninhabitable. The dependence upon the simple natural application of periodical rains to agricultural production, with the limitation of such supplies to the season in which they occur, with a restriction of their influence upon growth to only a few weeks after their cessation, followed by an inexorable drought of many months, has already prompted in many quarters considerable solicitude and inquiry as to its ultimate effects upon the products of the country, for it is evident that with supplies thus limited in variety and quantity to what is natural to our climatic conditions and to what can be raised in the short period intervening between the planting season and that of absolute drought, when artificial watering is not resorted to, the soil must fail to meet the wants of the population which is rapidly being spread over it. So vastly does the artificial watering of lands, or irrigation, as it is usually termed, increase and improve vegetable productions, that even in the moist climates of England, and other countries of Europe, it is practiced whenever opportunities will admit. In Piedmont and Lombardy, which are most favorably situated for this purpose, notwithstanding an annual rain-fall of thirty-six inches distributed through every season of the year, it is shown by their statistics that nearly one and a half millions of acres, constituting nearly one-fourth of the whole cultivated and culturable portions of these Italian provinces, are artificially watered. California certainly, as contrasted with these countries, which are thus far more favorably circumstanced in regard to intermittent rains and duration of vegetable growing seasons, is none the less in need of some such system for the increase of her agricultural products, if she means to provide at equitable rates and in suitable abundance for the future increase of her people.

It is not alone in the agricultural interests of her people that California is concerned in the utilization of water. As a State, she has interests which may be found to be involved in the matter. I alluded to her public lands, now almost valueless as a source of revenue, compared to what they might be made if reclaimed, as they probably can be by well known methods, where water is chiefly concerned. These lands, now overflowed so as to be for the most part inaccessible to agriculture, must ever remain in their present condition, and convertible to revenue only at the low rates at which they are now held, unless the State adopts some action upon an adequate scale for their improvement. The reclamation of these lands, aside from the advantages inuring to the State from their increased pecuniary value, is demanded by all the beneficial results which must ensue from their restoration to a habitable, improvable, and healthy condition. This result, of itself, constitutes the most forcible reason for an undertaking of the work at almost any price the public Treasury is able to afford, but it is believed that a proper investigation of all the conditions involved in the experiment will show that this cost will leave a wide margin of income from the demand and increased value which must arise from the reclaimed territory. The success of this undertaking thus places the State in possession of resources for revenues that, under the policy of neglect and inaction, must for years lie beyond its reach.

From such observations as I have been enabled to make in reference to the detail of the general subject just presented, I have every reason to believe that the most favorable conditions exist in California for making such an application of these methods of land reclamation, as must at very moderate cost realize most satisfactory results. Of the feasibility of the undertaking there can be no doubt, although the requisite calcula-

tions of the extent to which the system can be applied, and of the expense, with other questions involved, can only be determined by particular observations of the controlling circumstances of each locality presented for the required improvement. The system itself is but a simple imitation, though of course on a limited scale, of nature's own questions as exhibited in the formation of her vast alluvial plains. It consists of enclosing the tract to be reclaimed within a dike or embankment, admitting the alluvium-charged waters of the neighboring stream upon it, allowing the earthy matters to settle and then discharging the clear liquid, thus leaving a deposit of soil of greater or lesser depth, according to the quantity of matter originally held in suspension in the water. Of course, the effect of this method is to raise the surface operated upon, and the rate of such elevation depends upon the alluvium richness of the surcharged waters, and the repetition of the operation. It would therefore seem, from what is constantly seen of the natural and spontaneous effects of our rivers and streams, changed as they are almost to viscosity with "miner's mud," that, could their valuable deposits be spread over the low lands subjected to their inundations, and retained there, instead of filling up their own beds and obstructing navigation, a vast benefit would replace their present injury.

One of the most eminent examples of land reclamation by the system here mentioned is found in Tuscany, Europe, in the valley of the Chian river, which, for a length of about sixty miles, and an average breadth of about three miles, formerly existed in a frightful condition of unhealthiness and depopulation from malarious influences. The Government undertook the work of its reclamation, and the entire valley has been restored to culture, and occupied by a healthy and industrious population. Other examples in this Province, under similar circumstances, are now being carried on, as that of filling up the lakes and marshes of the coast of the Massenna. Among these, the most important is that of the Castiglione marsh which covers nearly thirty-four square miles of surface, constituting a district which for centuries had been associated only with pestilence and suffering. Although various attempts had been previously made for the amelioration of this condition of things, it was not until the year eighteen hundred and twenty-eight that the work was successfully undertaken. Since that time, in defiance of the most formidable obstacles presented by its peculiar position and marshy nature, to say nothing of its noxious exhalations, nearly the whole waste has been reclaimed. All these results have been obtained under more difficult circumstances, and through the agencies of much less efficient means, than would probably be found available in California, where the rivers and streams contiguous to low lands exist on a larger scale, and are more abundantly charged with alluvium.

It would be impossible in a paper as brief as I intended to make this to present this subject in its whole connection with the public benefit. The general term under which I have introduced it, of course includes every application that can be made of this universal element of water, and the numerous and various details of its economy and results, as embraced in its utilization, would involve a far greater labor than I can now bestow. I have attempted only to hint at its advantages, in the cases of two of the most important interests of California, aside from that of mining, in one of which I have endeavored to show by statements of actual examples, both its practicability and benefit if undertaken among ourselves. It remains for me to say a few words in regard to the results

that may be expected from its application to agriculture, in which, of course, individuals instead of the State, will have the first and most direct concern, although the latter may properly be called upon to lend its aid therein.

It may not be needless; in alluding to the advantages to be derived from irrigation, to remind those directly interested in the agriculture of California, that certain very important principles are concerned in the growth of vegetables, which, owing to the peculiar climate of this country, fall very far short of that complete operation that is necessary for the fullest results, unless aided by artificial means. I allude to the conjunction of heat and moisture. The best harvests are only obtained by the concurrence of these elements; the best lands, the best manures, and the best tillage, remain utterly sterile in the absence of either. The climate of California, to a considerable extent, is a singular illustration of the existence of this unfavorable condition; it gives its soil rain and moisture in the coldest season, and its greatest heat in the season of entire drought, thus offering to the farmer the only alternative of planting and raising only those crops that will naturally flourish under these anomalous conditions, and obliging him to limit his expectations to such returns as the short season of growth admits. What are termed winter crops seem to be the only results of the general system of tillage now practiced with us, those of summer, or green crops, being limited to the comparatively few localities where artificial watering is adopted, and these are raised only on the smallest scale for mere family use.

But it is in the interests of the stall and the dairy that the untoward influences of the climate are felt, and in this connection there seems to follow a train of unfavorable consequences, which cannot have failed to impress every observing eye cast in their direction. It may be shown that an absolute injury is being inflicted upon the soil itself by permitting its capacity to maintain cattle to remain limited by neglecting the means that might be used for its increase, and, following this, withholding its supply of manures; for, as every one knows, the exhaustion of the soil, the inevitable consequence of the growth and gathering of harvests, must be regularly supplied by the compensation of manures; no land, whatever may be its original richness, is able to resist the demands made upon it by constant croppings. The supply of manure, therefore, being chiefly through the agency of animals, it becomes indispensable that abundant and convenient means for their maintenance should be secured, and this in a very different manner from the shiftless Mexican system yet in vogue in the country, a system impossible with civilized customs, and incompatible with dairy husbandry altogether, yet, in such a climate as California, the only possible one without irrigation.

In extending the remarks to be made on this point, I find it convenient to refer to the observations made by a very distinguished writer on irrigation in France, whose works have been quite recently published. He views irrigation as constituting altogether the most potent agent for securing the complete operation of that fundamental principle recognized by all sound thinking agriculturists, viz: the production of manures; and although, in the extract I am about to quote, he makes an especial application of his argument to France, it is none the less pertinent to California, from its general scope, but still more applicable on the grounds of our unfavorable climate:

"In proportion as population and general prosperity increase, we must require from the soil those means of production which it has been al-

lowable hitherto to neglect. But of all the known means of attaining this end, the increase of live stock ought to be placed in the front rank.

"It is not merely because cattle furnish to man his most substantial nourishment, or because their price has, within a few years, greatly advanced, but it is principally because these cattle furnish in abundance *the fertilizing material*, which is the essential base of agricultural prosperity. Thus, then, whether because they produce food, (butchers' meat,) the value of which tends constantly to advance, or that they furnish the manure indispensable to cultivation, we see in all the countries of Europe the greatest encouragement constantly afforded to all attempts to increase the number of live stock; for, were it not for it, the productive power of the arable land, heavily taxed by the cultivation of the cereals, would soon be found growing less and less adequate to the pressing needs of consumption.

"This being admitted, we pass readily from the question of stock to that of the cultivation of the grasses, for they form, properly speaking, only one. The eminently useful introduction of artificial fields for the distribution of crops, and the recent adoption of some new plants suited for this treatment, are facts important to be stated, but they are not sufficient to realize the improvement desired. It is almost exclusively by extending the *permanent meadows*, that is, meadows properly so called, that there has been obtained, with certainty, the desired increase in the production of stock and manure.

"Those countries, even which, under a southern climate, have appeared most suitable for raising cattle, from a natural abundance of production of grasses, have not hesitated to increase these first resources. Thus, England, Germany, Holland, etc., have of late made many efforts to attain this end by the extension of the means of watering. Their governments have given the necessary encouragement, and the proprietors have hastened to enter upon this path, and have more and more found reason to congratulate themselves on having done so."

I have thus endeavored, though, perhaps, in a crude and hasty manner, to represent the importance of this great public economy, which, I am convinced, sooner or later must find a general application in this country. The subject has seemed to me to be worth the attention of the State, in its legislative capacity, involving as it does, and as I have attempted to show, the promise of great remunerative returns as revenue, and thus suggesting investigation, at least as to the propriety of its undertaking the necessary works. On the other hand, wherein is embraced more directly the interests of the agriculturist, it may be found necessary, in order to stimulate private enterprise to attempt, upon an adequate scale, those applications which are demanded in this direction, that the encouragement and aid of the State should be liberally given to insure their success. Thus, on all sides, there seem to be reasons why the subject here presented should claim attention from those who are charged with the improvement of the public welfare.

NAVY YARD, Mare Island, December 30th, 1862.

INTERNAL NAVIGATION AND RAILWAYS.

It is only in compliance with the requirements of the law defining the duties of Surveyor-General, that any allusion whatever is made to so important subjects as those of improving the internal navigation of the State, and the subject of railways.

It is a problem which has been too often demonstrated to require reiteration here, that when the two methods of communication—by water and railway—exist between two points, and the distances being about equal, the water is the cheapest, and does most of the freighting; while railway communication, being the quickest, enjoys almost a monopoly of the passenger travel, and a small portion of through-freight and way-freight, according to the productiveness of the country through which it passes.

The bar, commonly known as the Hog's Back, about six miles above Rio Vista, in Steamboat or Merritt's slough, is the greatest obstacle to inland navigation in the State, and it is believed that its removal, by an artificial narrowing of the channel, which at this point is very wide, may be easily effected; yet any report of a plan, without a thorough examination of its nature, would be useless. A small expenditure for such examination might be highly beneficial. No such obstacle to the free navigation of the San Joaquin exists.

It is only a question of time when the increased population of the State will require an extensive system of railways, to collect at convenient shipping points the large amounts of the cereals, for the production of which our State has become thus early so justly celebrated, and to distribute to the agricultural and mining districts their implements of husbandry, mining machinery, and such articles of merchandise as are not produced in their immediate vicinity.

These distributing branches must have connection with one Grand Trunk Road, the route of which, below the City of Sacramento, was established by Nature herself, when she placed the swamps of the Sacramento and San Joaquin, the Diablo range of mountains, and the Bay of San Francisco, in their present position, and the level plains of Yolo and Solano Counties in theirs. Want of knowledge of advantages, local interests, and other causes, may, for a time, ignore the decrees of nature, but time will prove them inexorable.

Legislative encouragement in many of the older States has greatly facilitated the construction of these great evidences of prosperity and civilization, and rich rewards have such States reaped in the rapid advancement of all their material interests in consequence. In this State, where the question of transportation is assuming such great importance, that liberal encouragement of all such enterprises cannot but result in liberal returns.

GRANT OF THE SIXTEENTH AND THIRTY-SIXTH SECTIONS FOR SCHOOL PURPOSES.

Sold for Cash under Act of April twenty-second, eighteen hundred and sixty-one.

The accompanying tables will show the disposition of these lands.

Locating Agents in the Stockton, Marysville, and Humboldt Districts, report that lands have been taken in lieu of all the sixteenth and thirty-sixth sections reserved by the General Government, or taken for private uses, leaving only sixteenth and thirty-sixth proper, to sell.

In the San Francisco District the Locating Agent shows that we are entitled to two hundred and thirty-one thousand acres in lieu of sections reserved, of which, as is shown by the books of this office, there has been applied for, one hundred and twenty-two thousand one hundred and eighty acres, leaving a balance of about one hundred and nine thousand acres yet due the State in the San Francisco District.

Nearly all the desirable land of this district being covered by grants, it will be difficult to find applicants for the remainder, unless we can be allowed by the Commissioner of the General Land Office, or a law of Congress, to go outside the district to locate it.

In consequence of the rejection of the Suscol Grant by the United States Supreme Court, a large tract of good land was thrown open to location, making our sales in that district during the past year amount to ninety-eight thousand six hundred and forty acres. In the Visalia District six hundred and forty acres have been sold this year, making a total to date of two thousand seven hundred and twenty acres, nearly all of which is upon sixteenth and thirty-sixth sections proper.

Lands taken in lieu of sections sixteenth and thirty-sixth, reserved or disposed of by the United States:

Description.	Acres.
Stockton District, approved, surveyed.....	17,500.00
Stockton District, approved, unsurveyed	30,652.92
Stockton District, unapproved, unsurveyed.....	640.00
Stockton District, unapproved, surveyed.....	520.00
Stockton District, unapproved, contested.....	3,390.57
	52,703.49
Humboldt District, approved, surveyed.....	10,533.64
Humboldt District, approved, unsurveyed	7,600.00
Humboldt District, unapproved, unsurveyed.....	320.00
Humboldt District, unapproved, surveyed.....	0.00
Humboldt District, contested, surveyed.....	1,115.20
	19,568.84
San Francisco District, approved, surveyed.....	9,940.00
San Francisco District, approved, unsurveyed.....	100,380.00
San Francisco District, unapproved, unsurveyed...	10,240.00
San Francisco District, contested, unsurveyed....	1,620.00
	122,180.00
Marysville District, approved, surveyed.....	30,807.84
Marysville District, approved, unsurveyed.....	3,128.50
Marysville District, unapproved, unsurveyed.....	0.00
Marysville District, unapproved, surveyed	640.00
Visalia District, approved, surveyed.....	2,640.00
Los Angeles District, approved, unsurveyed.....	4,468.40
	41,684.74
	236,137.07
By the Sixteenth and Thirty-Sixth Sections proper.....	52,333.43
Total amount of lands applied for under the grant.....	288,470.50

The sales of these lands, since the passage of the law, to date, are exhibited in the following tables :

Description.		Acres.
Approved locations, surveyed lands.....	105,577.91	267,144.73
Approved locations, unsurveyed lands.....	161,566.82	
Received and on file in this office, awaiting the expiration of the time required by section fifth of the Act :		
Applications on surveyed lands for.....	5,305.77	21,325.77
Applications on unsurveyed lands for.....	16,020.00	
Total located.....		288,470.50

Amount sold in the different Land Districts upon the sixteenth and thirty-sixth sections proper :

District.		Acres.
In Stockton District, surveyed	15,522.24	49,493.43
In Stockton District, unsurveyed.....	3,520.00	
In Humboldt District, surveyed	3,630.46	
In Humboldt District, unsurveyed.....	1,240.00	
In San Francisco District, surveyed.....	1,440.00	
In San Francisco District, unsurveyed.....	7,980.00	
In Marysville District, surveyed	13,483.73	
In Marysville District, unsurveyed.....	2,397.00	
In Los Angeles District, unsurveyed.....	200.00	
In Visalia District, surveyed.....	80.00	
		49,493.43
In Marysville, Stockton, San Francisco, and Humboldt, unapproved.....	2,840.00	2,840.00
Total.....		52,333.43

Part of the sixteenth and thirty-sixth section grant was sold by the Boards of Supervisors of the several counties, under the Act of April twenty-sixth, eighteen hundred and fifty-eight. The amounts of such sales reported by the County Auditors to this office, are as follows :

Counties.	Acres.
Merced.....	680.00
Humboldt.....	880.00
Placer.....	4,400.00
Sacramento	1,031.00
San Joaquin.....	6,433.00
Shasta.....	720.00
Siskiyou	2,320.00
Solano.....	160.00
Stanislaus	336.00
Tehama.....	280.00
Tulare..	1,480.00
Total, as far as reported.....	18,720.00

A law should be passed requiring the Boards of Supervisors of each county to report to the Controller or Register of the State Land Office, the amount of lands sold, and the price for which the same was sold, under the Act of April twenty-sixth, eighteen hundred and fifty-eight, in order that the provisions of section eight of the Act of April twenty-second, eighteen hundred and sixty-one, may be carried out.

SCHOOL LANDS—FIVE HUNDRED THOUSAND ACRE GRANT.

No additional sales of these lands have been made since the date of the report of eighteen hundred and sixty. I repeat from it the disposition that has been made of this grant:

Description.	Acres.
Sold under School Land warrants issued prior to the passage of the Act of April 23d, 1858	237,760.00
Sold for cash since the passage of the Act of April 23d, 1858.	261,197.83
Total disposed of.....	498,957.83

Leaving a balance of one thousand and forty-two and seventeen one-hundredths acres, which is reserved as a margin to correct errors in the final adjustment of the grant.

There have been re-locations of these lands during the past year to the amount of one thousand five hundred and ninety-three and ninety-eight one-hundredths acres, and patents have been issued for nine hundred and sixty acres.

SCHOOL LAND WARRANTS,

Located under Act of April 23, 1858.

Where Located.	Acres.
In the Marysville District, four Locations have been made this year, amounting to.....	1,600.00
Total to date of this Report.....	17,612.00

STATE SCHOOL LAND WARRANTS,

Located upon Unsurveyed Lands, under Act of April 18, 1859.

Locations.	Acres.
Approved Locations within the present year.....	17,600.00
Unapproved Locations within the present year.....	3,680.00
Total approved and unapproved Locations to date of this Report.....	57,760.00

SEMINARY LANDS.

Description.	Acres.
Amount of Grant of 72 Sections.....	46,080.00
Total Located at date of Report of 1860..... 38,846.82	
Located in Humboldt District since..... 480.00	
Located in San Francisco District since..... 320.00	
Total returned to this office at date.....	39,646.82
Balance unreturned.....	6,433.18

After the passage of the law providing for the sale of these Lands, they were apportioned to the different Land Districts. In some districts, applications have not been made for the full apportionment, leaving on hand the balance above, which will be again distributed where it is most wanted.

SWAMP LANDS.

From the segregation surveys returned to this office by the County Surveyors, the information contained in the following table has been compiled, to which is added a list of the amounts of Swamp Land sold during the year ending December thirteenth, eighteen hundred and sixty-two.

COUNTIES.	Returned by U. S. Surveyor as Swamp Lands.....	Sold by the State as Swamp Lands.....	Sold by the State, and claimed by the United States.....	Sold by the State, and claimed by the United States, but shown to be Swamp Lands by affidavits.....	Total amount of Swamp Land returned.	Swamp Land Surveys returned, to be approved during the year ending Dec. 15, 1862....
Sutter.....	39,610.15	58,804.00	12,030.44	10,080.60	111,194.19	499.71
Colusa.....	26,384.00	12,725.00	.....	.....	98,842.00	853.23
Humboldt.....	not shown..	9,919.00	.....	.....	21,970.70	155.64
Placer.....	no surveys.	11,350.00	.....	.....	13,120.00	1,680.00
Sonoma.....	.....	9,944.00	.....	.....	21,211.17	.....
Monterey.....	.....	893.55	.....	.....	2,388.51	553.39
Sacramento.....	27,840.00	146,911.30	14,922.57	9,797.62	162,014.66	1,465.89
Alameda.....	no surveys.	10,032.33	.....	.....	37,133.19	781.20
Santa Clara.....	.....	4,314.89	.....	.....	14,566.74	6,551.71
Lake.....	not shown..	2,968.93	.....	.....	5,759.65	.....
Yolo.....	53,738.00	119,775.00	14,980.00	7,500.00	182,486.44	4,031.86
San Joaquin.....	not shown..	186,124.00	1,600.00	1,600.00	235,571.55	5,547.12
Solano.....	24,520.00	71,519.00	.....	.....	99,858.00	4,174.64
Napa.....	.....	9,462.00	.....	.....	12,060.00	.....
<i>No Segregation Surveys made—</i>						
Contra Costa.....	.....	.....	.....	.....	.....	258.07
San Mateo.....	.....	.....	.....	.....	.....	8,129.57
Fresno.....	.....	.....	.....	.....	.....	1,280.00
Tulare.....	.....	.....	.....	.....	.....	80.00
Total Segregated.....	.....	.....	.....	.....	1,018,166.80	.....
Total returned during past year.....	.....	.....	.....	.....	.....	36,042.03

Of the amount returned during the past year, thirteen thousand nine hundred and forty-five and thirty-three one-hundredths are embraced in resurveys of forfeited lands.

FLOOD STATISTICS.

During the prevalence of the floods of last winter, while the incidents connected with them were fresh in the memory of all, copies of the following circular, the object of which is explained by itself, were addressed to each of the County Surveyors throughout the State. At the same time, letters were addressed to responsible persons in different parts of the State, requesting them to furnish this office with any reliable information regarding the destruction by the late flood of any old landmarks or evidences of antiquity, which would tend to show the extent of the floods of eighteen hundred and sixty-two, as compared with those of former years :

[CIRCULAR.]

SURVEYOR-GENERAL'S OFFICE,
Sacramento, February 13th, 1862. }

SIR:—It is deemed of utmost importance to preserve in concise form in the State archives, for future reference, as much statistical information as possible in regard to the recent floods throughout the State.

The most proper method of obtaining such information seems to be through the Surveyors of the several counties, acting under instructions from the Surveyor-General.

There is no appropriation out of which such services can be paid, but it is hoped that an interest in the general welfare will prompt each of the County Surveyors to as efficient a performance of this duty as possible.

You will therefore, whenever opportunity occurs, so far as it can be done without expense to the State, collect all possible information upon the points indicated below, and any other information you may deem of importance in this connection, and report to this office in July next :

First—The extreme height above low water at any well designated points upon streams in your county.

Second—Date of highest water.

Third—The general depth over the adjacent lands.

Fourth—The approximate quantity of land overflowed in your county.

Fifth—If the banks of the streams have been seriously affected, state in what manner and to what extent.

Sixth—If any bars were formed, or considerable change of channel occasioned, state the facts and circumstances.

Seventh—If there was much deposit upon submerged lands, state the general depth and character of it.

Eighth—Upon Swamp and Overflowed Lands, state the depth of water and general direction of the current, depth of deposit, etc.

It is suggested also, that all persons having facilities for doing so, should be requested to mark distinctly, upon large trees, or other objects not liable to removal, the point of highest water.

The value of this information will readily suggest itself to the Surveyors of counties containing Swamp Lands belonging to the State, in reference to their future reclamation.

Very respectfully, your obedient servant,

J. F. HOUGHTON,
Surveyor-General.

To _____, County Surveyor,
_____ County, California.

The result, so far as answers have been received, has been highly satisfactory, and the testimony furnished in the report of Amos Matthews, County Surveyor of Yolo, and of Dr. Louis M. Booth, of Stanislaus, furnish strong circumstantial evidence that the flood of eighteen hundred and sixty-two is without a parallel in centuries past.

In Yolo County, Indian mounds of great depth, formed of the lightest material, which would almost float in still water, bearing unmistakeable evidence of great antiquity in the large oaks growing upon them, have been almost entirely carried away, trees and all, leaving strewn along the course of the current, numberless skulls and other bones of the tribes who once inhabited the Valley of the Sacramento, and who made these mounds, at the same time the home of the living and the resting-place of the dead.

Reliable information has reached me of the destruction, by the rising of the waters melting the sun-dried bricks of which it was constructed, of an old adobe house in Solano County, built twenty-five years since, in a position which had ever before been above the rise of the waters. Evidence which is believed to be reliable, has been received of a similar disaster to an old adobe, built in the valley of Russian river fifty years since.

By the report of Dr. Booth it will be seen that the Stanislaus river, which, to all appearances, had for centuries discharged its waters through its proper channel, and allowed alluvial deposits to accumulate upon its banks to the depth of ten or twelve feet, and upon the top of this deposit oaks from five to ten feet in diameter to grow undisturbed for more than three hundred years, during the great flood of eighteen hundred and sixty-two tore away its old banks, carried away considerable tracts of land well grown over with timber, and uprooted and carried down its swollen stream the trees which its waters had so long nourished, and in some places left its old bed, and formed a new channel entirely away from it.

The report of Mr. Drew, County Surveyor of San Joaquin, in answer to the circular, contains full statistics of the flood in the vicinity of Stockton, and the county, which will be valuable in reference to the reclamation of the great body of Swamp Lands bordering the San Joaquin and other rivers in that county.

The County Surveyors of Lake and Fresno have also furnished valuable information respecting the flood in their counties.

An erroneous impression prevails to a considerable extent, created chiefly by a series of well written articles published last spring in several public journals of the State, that the Straits of Carquinez, connecting Suisun and San Pablo Bays, have, by incapacity to discharge a sufficient amount of water, contributed largely to the overflow of the Sacramento Valley.

It is a well admitted and self-evident principle in hydraulics, that when an obstruction to the free passage of any current of water occurs, it is accompanied by a corresponding rise in the water. Had the writer of these articles applied this simple test to the Straits of Carquinez, no complaints would have been made of their want of capacity.

The highest water ever known at Benicia was occasioned by an extraordinary high tide, being eight inches higher than any previous spring tide, and occurring about the fifth or sixth of January, eighteen hundred and sixty-two, or several days before the highest flood, and at no time afterwards was the water so high as on that day.

Upon the Swamp Lands bordering the Suisun Bay on the north, at a distance of about a mile below Collins' Landing, hogs lived all winter,

with no floating islands to flee to, showing that there could not have been two feet of water at any time on the marsh.

Ascending the Sacramento, at a distance of a mile above Collins', the water was about four feet over the marsh, and at Rio Vista it had increased to about eight feet.

FLOATING ISLANDS.

These curious phenomena, existing, so far as observed, only in the delta at the mouths of the Sacramento and San Joaquin, and along the banks of the last named river, having attracted considerable attention during the floods, I caused an examination to be made by persons in whom I placed reliance, to ascertain their origin. They were found to be an aggregation of strong fibrous grasses and roots, which had overgrown sloughs and small lakes, which frequently occur in the Swamp Lands, interweaving and increasing in thickness until sufficiently bouyant and strong to bear live stock, and even loaded wagons.

Some cases were found where it was thought this mass of grass and roots rested upon, without adhering to, quicksands beneath, and were floated by rising water. A knowledge of the locality of these islands would be valuable with reference to reclamation.

Reports have been received from Surveyors of the following counties only: Yolo, San Joaquin, Lake, and Fresno.

It is much to be regretted that notwithstanding the law requiring them to report to this office is plain, and indicates to them what they shall report upon, so few of them feel sufficient interest to comply with the law.

I am under many obligations to Dr. Thomas M. Logan, of Sacramento, for valuable information which he has allowed me to compile from his most complete and reliable records; also, for a chart showing the oscillations of the Sacramento river, with full tables of meteorological observations at Sacramento, extending over a period of thirteen years.

Also, to Mr. William A. Begole, of Red Dog, Nevada County, for measurements of rain falling at that place from December twenty-third, eighteen hundred and sixty-one, to June twelfth, eighteen hundred and sixty-two, showing by actual measurement that there fell during that time, seventy-nine and fifty-three one-hundredths inches of rain, and he estimates that before the twenty-third of December there had fallen about thirty inches, which would give for the whole season upwards of nine (9) feet of rain, a quantity without a parallel in the history of observations.

I am also indebted to Hon. W. H. Lyons, of Stockton, for valuable information collected and forwarded by him, at my request. All of which information, charts, tables, and reports, are herewith submitted.

From all the information I have been able to collect, which is not as full as I had reason to hope would be furnished in response to the circular to County Surveyors, yet is quite satisfactory, I have found the following remarkable combination of circumstances tending to produce the floods of December ninth, eighteen hundred and sixty-one, and January tenth, eighteen hundred and sixty-two, and continuing several weeks later:

During the latter part of the month of November, and the first few days of December, eighteen hundred and sixty-one, large quantities of snow fell in the mountains to the east and north of us.

The average temperature of the month of December for eight years,

at Sacramento, is forty-six and thirty-one one-hundredths degrees, ($46^{\circ}.31$) December, eighteen hundred and sixty-two, being forty-three degrees (43°); while the average of December, eighteen hundred and sixty-one, reaches the high figures of fifty and ninty-eight one-hundredths degrees, ($50^{\circ}.98$.) and the few days preceding the flood still higher, as follows: December seventh, fifty-six degrees (56°); December eighth, fifty-seven and sixty-six one-hundredths degrees ($57^{\circ}.66$); December ninth, fifty-one and sixty-six one-hundredths degrees, ($51^{\circ}.66$.)

On each of these days a warm rain was falling, which rapidly melted the large accumulations of snow in the mountains, and the rivers, already high, receiving these accessions of rain and melted snows of the seventh and eighth of December, reached here on the ninth of December, with the result already too well known.

Mr. Begole, as is shown by his report, also estimates that previous to the twenty-third of December, some thirty inches of rain had fallen, and although we have no positive measurements of each day's downfall, reports which were received daily from the interior show that the weather in many mountain localities was warm, and heavy rains were falling for several days preceding the flood of December ninth.

The flood of January, eighteen hundred and sixty-two, which reached its highest point at Sacramento about nine o'clock p. m. of the tenth of said month, combined all the unfavorable circumstances of that of the previous month, with the most remarkable downfall of rain ever recorded.

The temperature at Sacramento for a few days previous to and succeeding the highest stage of water, was: for December seventh, forty-seven degrees (47°); December eighth, fifty and sixty-six one-hundredths degrees ($50^{\circ}.66$); December ninth, fifty-four and sixty-six one-hundredths degrees ($54^{\circ}.66$); December tenth, fifty-seven degrees (57°); December eleventh, fifty-seven and sixty-six one-hundredths degrees ($57^{\circ}.66$); while the average of the whole month was only forty-six and forty-one one-hundredths degrees, ($46^{\circ}.41$) and the average of January for eight years, was forty-five and fifty-nine one-hundredths degrees, ($45^{\circ}.59$).

Allowing a corresponding high temperature for the mountain counties, nearly every particle of snow must have been melted and hurried off to the first common receptacle, the great valley of the Sacramento.

This theory is well borne out by the facts, for in the early part of January nearly all the snow which had accumulated on the mountain tops since the December flood had disappeared, showing that a high temperature prevailed there as well as at Sacramento.

This high temperature, as will be shown by reference to the reports of Mr. Begole and Dr. Logan, was accompanied by the most remarkable and almost incredible fall of rain, before referred to.

Mr. Begole reports from December twenty-third to December thirtieth, seven and fifty one-hundredths inches of rain; December thirtieth to January ninth, six and sixty-five one-hundredths inches; January tenth, five and eighty-two one-hundredths inches; January eleventh, five and fifty one-hundredths inches; being a total of twenty-five and forty-seven one-hundredths inches in nineteen days, or eleven and thirty-two one-hundredths inches in forty-eight hours, ending with January eleventh. This includes ten inches of snow, which is reduced to rain, being about equal to one inch; and also shows a total of forty-five and three one-hundredths inches falling in that locality from December twenty-third to January twenty-third.

Dr. Logan's report shows that on the eighth of January there fell at

Sacramento, six hundred and eighty one-thousandths inches rain; January ninth, one and four hundred one-thousandths inches; January tenth, seven hundred and sixty one-thousandths inches; January eleventh, nine hundred and ninety-six one-thousandths inches; and a total for the month, of fifteen and thirty-six one-thousandths inches. The nearest approach to which was in December, eighteen hundred and forty-nine, in which fell twelve and one half inches; and next, in March, eighteen hundred and fifty, in which month fell ten inches.

In view of all the above facts, the greatest wonder is that the water did not obtain a greater height than even that of January tenth, eighteen hundred and sixty-two.

I have presented these facts, together with the absence of evidence of any similar occurrence in the past, to show how remote is the probability of another such combination of unfavorable circumstances in the future, and to restore, so far as it may, confidence to the purchasers of the State Swamp and Overflowed Lands bordering the great artery of the State, that another such overflow cannot reasonably be anticipated in their lifetime.

OFFICE APPROPRIATIONS.

I desire to call your attention to the fact that in the Act making appropriations for the support of the civil government for the fourteenth fiscal year, the following very necessary appropriations for the Surveyor General's and Register's office were, by some oversight, omitted:

Postage and expressage.

Porter for the two offices.

Copying township maps for County Surveyors.

Postage I have been compelled to pay out of my private funds as the bills were presented. Expressage, after much annoyance and correspondence with County Surveyors and Locating Agents, requiring them to pay charges on packages which properly belonged to the State to pay, was finally adjusted by an arrangement with Wells, Fargo & Co.'s Agent at Sacramento to take packages from the office and charge to the State, trusting to the coming Legislature for their pay.

This neglect of the last Legislature was exceedingly annoying, and in the month of July upwards of a thousand documents were detained in the office for want of provision for postage and expressage, and had I followed strictly the letter of the law, they would have remained there to this day, and no documents or letters requiring postage or express charges, would have gone from this office.

Every patent issued for Swamp or School Lands requires to be taken from the Register's office to the Governor for signature, from there to the Secretary of State for signature and seal, and returned to the Register's office for record.

For this and other duties belonging to a Porter, such as carrying matter to and from the post and express, and sweeping offices, attending fires, etc., a Porter has been employed for the Surveyor-General's and State Land Office, for the payment of whom I recommend an appropriation of three hundred dollars for the fourteenth fiscal year.

Previous to my assuming the duties of this office, appropriations were made every year for copying the township maps purchased of the United States Surveyor General as the lands are surveyed, for the use of the Surveyors of the counties in which the lands were located.

This appropriation was omitted last session, and at the same time

the clerical force of my office was reduced by compelling the payment into the State Treasury of fees which were heretofore allowed to be expended for additional clerks. The result has been, that with the reduced force and the many additional duties imposed, it has been impossible to furnish County Surveyors with these copies.

The following statement will show the difference in appropriations for maintaining the Surveyor-General's office and the State Land Office, for the years eighteen hundred and sixty-one and eighteen hundred and sixty-two, aside from salary of Surveyor-General and Register:

<i>For the Year 1861.</i>	
Salary of two Clerks for Land Office.....	\$4,800 00
Salary of one Clerk for Surveyor General's office.....	2,400 00
Fees allowed to be retained by Act of April 22d, 1861, for additional Clerk hire, about.....	1,500 00
Porter for State Land Office and Surveyor General's office...	300 00
Allowed for preparing Swamp Land Map.....	1,000 00
Allowed for purchasing United States Township Maps.....	500 00
Allowed for copying United States Township Maps for County Surveyors and Locating Agents.....	250 00
Allowed for Rent.....	720 00
Allowed for Contingents, including Postage, Express, etc....	800 00
Total for 1861.....	\$12,270 00

<i>For the Year 1862.</i>	
Salary of two Clerks for Land Office.....	\$4,200 00
Salary of one Clerk for Surveyor-General's office.....	1,800 00
Additional Clerk for copying affidavits and preparing lists for United States Surveyor-General and Hon. W. H. Parks.....	600 00
Rent of offices.....	720 00
Removal of offices and repairs of furniture.....	200 00
Safe for Land Office.....	400 00
Total for 1862	\$7,920 00
Reduction in favor of 1862	\$4,350 00

Detailed Statement of the expenditure of all appropriations (other than salaries) for the offices of the Surveyor General and Register of the State Land Office, for the last half of the fiscal year of eighteen hundred and sixty-one and eighteen hundred and sixty-two, and the first half of the fiscal year of eighteen hundred and sixty-two and eighteen hundred and sixty-three:

Expressage.....	\$54 97
Lull, Ross & Co., for carpets, curtains, mats, etc.....	242 95
Postage.....	49 16
Newspapers.....	37 00
Removing offices and repairing furniture.....	200 00
Clerical services in preparing information for State Commissioner to Washington.....	600 00
Office rent.....	675 00
Total.....	\$1,858 98

J. F. HOUGHTON,
Surveyor-General and Register.

Sworn to and subscribed before me, this 2d day of January, 1863.

A. K. GRIM,
Notary Public, Sacramento County, Cal.

Deficiency of appropriations for Surveyor-General's and State Land Offices for the first half of the fiscal year of eighteen hundred and sixty-two and eighteen hundred and sixty-three:

Postage.....	\$112 98
Expressage.....	144 25
Seal for Surveyor-General	30 00
Porter.....	150 00
Total.....	\$437 23

The above indebtedness has actually been incurred, the contingent item having been accidentally omitted in the last annual appropriation bill. It is recommended that an appropriation of one thousand dollars be now made to cover the above amount, the similar sum which will be needed for the same purposes during the remaining half of the fiscal year, and to provide for the binding of the copies of the United States township maps, and other maps and plats required for daily use, and now in inconvenient form and liable to injury.

INCHES OF RAIN FALLING AT SACRAMENTO

During the Months of December, 1861, and January, 1862, also the mean of the Thermometer during the same time.

DECEMBER.			JANUARY.		
Days.	Inches of Rain.	Mean Temp.	Days.	Inches of Rain.	Mean Temp.
1	.....	59	1	.....	51
2	0.015	57	2	.....	49½
3	0.105	57	3	0.020	41½
4	0.010	50	4	.....	38½
5	.....	44½	5	2.080	41½
6	0.020	48	6	0.610	41½
7	0.030	56	7	.....	47
8	0.080	57½	8	0.680	50½
9	0.910	51½	9	1.400	54½
10	.....	47½	10	0.760	57
11	.....	48	11	0.996	57½
12	0.008	47	12	.....	53
13	0.012	46	13	.....	48½
14	0.010	46½	14	0.680	45
15	.....	48	15	.....	41
16	0.025	48½	16	0.950	42
17	.....	49½	17	3.460	46½
18	.....	50	18	.....	52½
19	0.120	50½	19	.....	51½
20	.....	50	20	1.650	54½
21	0.030	47½	21	0.800	55
22	0.480	50	22	0.700	56
23	1.040	51½	23	.....	51
24	0.470	53½	24	.....	45½
25	.....	49½	25	.....	44
26	2.230	50½	26	.....	42½
27	0.210	52½	27	.....	35½
28	0.130	51½	28	.....	35
29	0.430	58½	29	0.250	37½
30	0.660	54½	30	.....	37½
31	0.170	53½	31	.....	36
Total...8.637		Mean...50.98	Total..15.036		Mean....46.41

Mean Temperature for December, for eight years.....43.

Mean Temperature for January, for eight years45.59.

RED DOG, December 25th, 1862.

Hon. J. F. HOUGHTON,
Surveyor-General:

DEAR SIR:—I have just received your communication of December twenty-second, and in reply would state that I kept an account of the amount of rain that fell at this place after the twenty-third day of December, A.D. eighteen hundred and sixty, to June twelfth, eighteen hundred and sixty-one, and if the account is of any benefit to you I give it with pleasure, because I consider it the duty of every citizen to afford such information when it is in their power to do so.

Date.	Remarks.	Inches.
1861.		
December 30.....	For week ending at date	7.50
1862.		
January 1 to 9...	Including snow of ten inches	6.65
January 10.....	Twenty-four hours	5.82
January 11.....	Twenty-four hours	5.50
January 12.....	Twenty-four hours .....	.50
Jan. 12 to Jan. 18	Six days, including snow.....	8.50
Jan. 19 and 20...	Two days.....	3.63
January 21.....	Twenty-four hours.....	2.25
January 22.....	Twenty-four hours	3.00
January 23.....	Twenty-four hours	1.68
January 24.....	Slight snow squalls, with clear and cold night. Thermometer at 8, A. M. 20°	
January 25.....	Clear and cold. Thermometer at sunrise, 18°...	
January 26.....	Clear and cold. Thermometer at sunrise, 18°...	
January 27.....	Cloudy and cold. Thermometer at sunrise, 16°, with three fourths of an inch of snow.....	
January 28.....	Clear and cold. Thermometer at sunrise, 6°...	
January 29.....	Snow. Thermometer at 7, A. M. 22°	
January 30.....	Snow sixteen inches deep. Thermometer at 7, A. M. 30°	
January 31.....	Clear and cold. Thermometer at 7 A. M. 20°...	
February 1.....	Cold and cloudy. Thermometer at 7 A. M. 26°. Amount of water in snow.....	1.84
February 2.....	Clear and cold. Thermometer at 7 A. M. 22°...	
February 3.....	Snow. Thermometer at 7 A. M. 32°	
February 4.....	Clear. Water in snow.....	.68
Feb. 4 to Feb. 18	Clear, with cold and freezing nights.....	
February 19.....	Snow squalls.....	
February 20.....	Clear.....	
February 21.....	Snow	
February 22.....	Snow and rain.....	
February 23.....	Rain.....	
February 24.....	Amount of water falling in three days past.....	4.14
	Carried forward.....	51.69

Date.	Remarks.	Inches.
1862.	Brought forward	51.69
Feb. 25 and 26...	Rain.....	4.87
February 27.....	Rain	1.48
February 28.....	Rain.....	
March 1.....	Rain.....	.22
March 2.....	Clear	
March 3	Clear.....	
March 4.....	Clear.....	
March 5.....	Rain.....	.37
March 6.....	Fair.....	
March 7.....	Snow	
March 8.....	Fair	
March 9.....	Snow	
March 10 and 11	Rain.....	2.25
March 12.....	Warm rain.....	1.25
March 13.....	Clear.....	
March 14.....	Rain.....	.75
March 15 and 16	Rain.....	3.00
March 17 to 25...	No rain	
March 26 and 27	Rain.....	1.50
Mar. 28 to Apl. 8	Rain.....	4.50
April 8 to 10.....	Rain.....	.50
April 10 to 14....	Slight Rains	1.10
April 14 to 30....	No rain	
May 1, 2, and 3..	Rain.....	4.10
May 9, 10, and 11	Snow and rain	1.25
June 2.....	Rain.....	.25
June 9.....	Rain.....	.20
June 12.....	Rain.....	.25
	Making in all, after December 23d.....	79.53

There was probably about thirty inches fell before I commenced measuring it. The mean temperature I have not kept.

The foregoing table is just as I have kept it. It affords me pleasure in transmitting it to you.

All of which is respectfully submitted.

Yours,

WM. A. BEGOLE.

ASSESSORS' REPORTS.

Assessors' Reports are much more complete than have before been received for several years, and many of them give evidence of much care and attention, while others have been prepared in a rough manner, and seem to be careless estimates of the Assessor. The importance of obtaining correct statistical information of every branch of industry of our

State, in this age of enlightenment, when statistics have been reduced to a science by older countries, cannot be too highly appreciated.

Reports have been received from the following counties, and are herewith submitted:

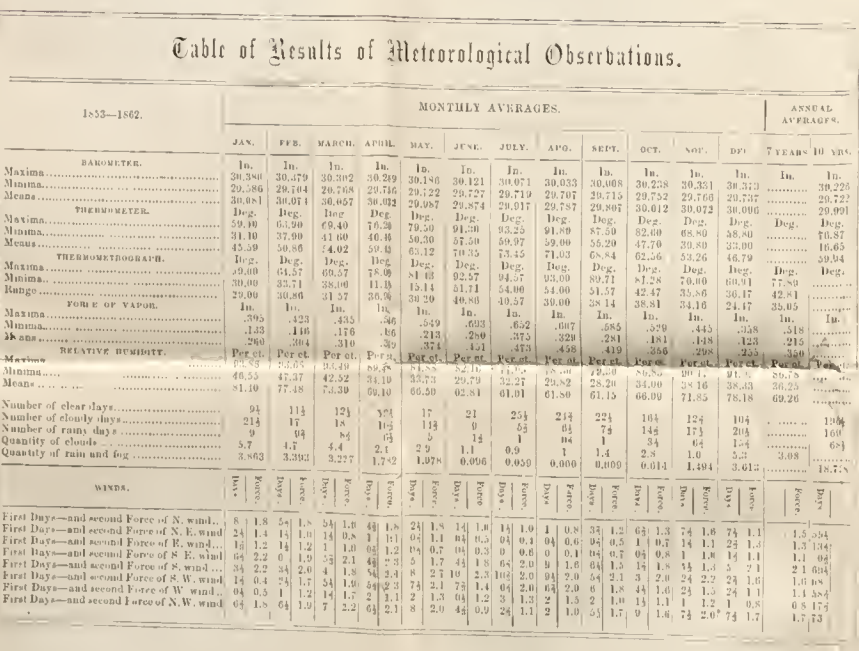
Alameda.....	Isham Case, Assessor.
Amador.....	Francis McGrath, Assessor.
Butte.....	S. Y. Hale, Assessor.
Calaveras.....	District Assessors.
Colusa.....	H. W. Brown, Assessor.
Contra Costa.....	N. J. Clarke, Assessor.
Del Norte.....	George W. Russell, Assessor.
El Dorado.....	George McDonald, Assessor.
Fresno.....	Thomas Allen, Assessor.
Humboldt.....	R. Wiley, Assessor.
Klamath.....	B. F. Pike, Assessor.
Lake.....	E. L. Musick, Assessor.
Marin.....	John J. Grinter, Assessor.
Mariposa.....	George W. Cornell, Assessor.
Mendocino.....	John Benton, Assessor.
Mered.....	Job Wheat, Assessor.
Monterey.....	W. V. McGarvey, Assessor.
Napa.....	A. B. Walker, Assessor.
Nevada.....	George B. McKee, Assessor.
Plumas.....	William W. Kellogg, Assessor.
Sacramento.....	E. B. Ryan, Assessor.
San Bernardino.....	W. T. Hughes, Assessor.
San Francisco.....	C. C. Webb, Assessor.
San Joaquin.....	J. M. Long, Assessor.
San Luis Obispo.....	Valentine Gajiola, Assessor.
San Mateo.....	S. H. Snyder, Assessor.
Santa Clara.....	D. M. Harwood, Assessor.
Santa Cruz.....	Nelson Taylor, Assessor.
Shasta.....	C. Watkins, Assessor.
Sierra.....	A. Marmon, Assessor.
Siskiyou.....	Thomas O. Rourke, Assessor.
Solano.....	Cyrus Ayer, Assessor.
Sonoma.....	A. Walker, Assessor.
Stanislaus.....	G. W. Curry, Assessor.
Sutter.....	R. A. Clarke, Assessor.
Tehama.....	Samuel English, Assessor.
Trinity.....	G. F. Miers, Assessor.
Tulare.....	R. B. Sagely, Assessor.
Yolo.....	C. J. Overshiner, Assessor.
Yuba.....	T. J. Sherwood, Assessor.

For Placer, San Diego, Tuolumne, and Los Angeles, from which no reports have been received, the statistics of the preceding years have been used in preparing the accompanying tables.



Lat. 38° 31' 41" N. Long. 121° 29' 44" W. Height above the Sea at lower surface of Mercury 65 ft. 5 in. Height at the top of the levee in front of the City 54 ft. 5 in. above the Sea at low tide at San Francisco

[Faint handwritten text at the bottom of the page, likely bleed-through from the reverse side.]



The Oscillations of the River. The river rises to a height of four feet from zero, or the extreme low water mark observed at spring tide in eighteen hundred and forty-nine, to the highest point the river has yet been known to rise, viz: twenty-four feet, on the tenth of January, eighteen hundred and sixty-two. The mean depth of the channel of the river is about thirteen feet below zero, and the width three hundred yards. There is a tidal flow and ebb of from one to two feet, according to the course and force of the wind and the stage of the river. If the wind blows strongly from the north, this fall is still greater, especially during spring tides. The stage of the water is also affected by the temperature, as well as by the amount of rainfall. The warmer the rains, the less snow falls on the mountains, and the sooner that which has already fallen there is melted; and, consequently, the more sudden is the rise of the river.

MONTHS.	'49-'50.	'50-'51.	'51-'52.	'52-'53.	'53-'54.	'54-'55.	'55-'56.	'56-'57.	'57-'58.	'58-'59.	'59-'60.	'60-'61.	'61-'62.	Mean.
September.....	0.250	0.000	1.000	0.000	0.003	Sp'kle	Sp'kle	Sp'kle	0.000	Sp'kle	0.025	0.003	0.000	0.103
October.....	1.500	0.000	0.180	0.000	0.005	1.010	0.000	0.135	0.655	3.010	0.000	0.914	0.000	0.574
November.....	2.250	Sp'kle	2.140	6.000	1.500	0.650	0.750	0.651	2.406	0.147	6.485	0.181	2.170	1.941
December.....	12.500	Sp'kle	7.070	13.410	1.540	1.150	2.000	2.396	2.632	1.339	1.834	4.282	8.637	4.753
January.....	4.500	0.650	0.580	3.000	3.250	2.670	4.919	1.375	2.444	0.964	2.310	2.668	15.036	3.412
February.....	0.500	0.350	0.120	2.000	8.500	3.460	0.692	4.801	2.461	3.906	0.931	2.920	4.260	2.685
March.....	10.000	1.880	6.400	7.000	3.250	4.200	1.408	0.975	2.878	1.637	5.110	3.320	2.800	3.889
April.....	4.250	1.140	0.190	3.500	1.500	4.320	2.132	Sp'kle	1.214	0.981	2.874	0.475	0.821	1.800
May.....	0.250	0.690	0.800	1.450	0.210	1.150	1.811	Sp'kle	0.203	1.037	2.491	0.599	1.808	0.925
June.....	0.000	0.000	0.000	0.001	0.310	0.010	0.033	0.350	0.098	0.000	0.017	0.135	0.011	0.074
July.....	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.012	0.000	0.030	0.519	0.000	0.045
August.....	0.000	0.000	0.000	0.000	Sp'kle	0.000	0.000	Sp'kle	Sp'kle	0.000	0.000	0.000	0.006	0.002
Totals.....	36.000	4.730	17.980	36.362	20.068	18.620	13.770	10.443	15.003	16.021	22.107	16.097	35.549	20.204

STATISTICAL TABLES.

TABLE OF STATISTICS

Compiled from the Official Reports of County Assessors, for the Year 1861, returned to the Surveyor-General.

COUNTIES.	Acres of Land enclosed.....	Acres of Land cultivated.....	WHEAT.		BARLEY.	
			Acres.....	Bushels.....	Acres.....	Bushels.....
Alameda.....	81,460	84,320	18,000	600,250	6,000	240,300
Amador.....	38,483	10,290	1,460	34,800	1,540	46,200
Butte.....	75,000	38,500	10,000	250,000	8,000	240,000
Calaveras.....	43,053	8,242	201	2,887	1,263	23,466
Colusa.....	105,360	42,051	16,538	.....	17,961	.....
Contra Costa.....	.....	.....	.....	611,696	.....	193,062
Del Norte.....	.....	.....	.....	.....	.....	.....
El Dorado.....	.....	.....	.....	.....	.....	.....
Fresno.....	4,975	3,980	178	.....	1,958	.....
Humboldt.....	15,120	8,558	450	8,500	1,000	19,000
Klamath.....	2,185	1,383	1,388	31,653	65	3,918
Lake.....	24,550	4,593	667	10,005	.....	.....
Los Angeles.....	.....	11,040	1,713	34,260	903	13,475
Marin.....	97,960	10,881	2,500	4,000	2,400	7,000
Mariposa.....	9,436	2,469	3,055	61,100	800	20,000
Mendocino.....	95,500	50,400	.....	.....	200	6,000
Merced.....	18,720	14,340	11,000	300,000	7,200	200,000
			1,650	34,720	4,700	76,800

Monterey.....	98,000	19,765	5,350	107,000	7,460	223,800
Mono.....	.....	.....	.....	.....	.....	.....
Napa.....	78,641	26,525	21,253	425,060	681	20,430
Nevada.....	.....	.....	180	3,740	.....	220
Placer.....	.....	.....	5,000	170,000	4,450	130,400
Plumas.....	.....	.....	.....	.....	.....	.....
Sacramento	80,089	29,998	7,357	162,069	15,523	263,379
San Bernardino.....	20,000	15,000	2,000	42,000	4,000	40,000
San Diego.....	4,500	3,000	600	1,000	1,300	20,000
San Francisco.....	.....	.....	806	31,421	.....	7,240
San Joaquin.....	257,225	164,150	65,850	987,750	49,400	988,000
San Luis Obispo	30,000	2,000	300	3,000	700	6,000
San Mateo.....	104,200	26,353	10,000	220,000	4,252	140,000
Santa Barbara.....	.....	6,000	.....	800	.....	5,600
Santa Clara.....	375,000	160,000	75,000	1,500,000	20,000	500,000
Santa Cruz.....	55,632	17,616	5,275	145,422	3,439	129,930
Shasta.....	.....	.....	1,200	124,000	3,000	20,000
Sierra.....	300	150	.....	.....	3	100
Siskiyou.....	53,000	10,000	3,900	175,000	1,800	54,000
Solano	360,582	82,828	32,388	1,133,580	4,048	161,920
Sonoma.....	193,161	47,794	14,051	386,283	4,040	137,729
Stanislaus	20,000	13,580	3,616	10,848	4,416	13,848
Sutter	80,200	28,850	6,400	145,860	10,150	200,900
Tehama.....	39,841	19,919	.....	78,315	.....	39,163
Trinity.....	8,457	2,534	100	2,000	100	2,500
Tulare.....	25,000	10,225	500	150,000	3,000	90,000
Tuolumne	14,370	11,200	1,585	3,758	795	1,762
Yolo.....	110,000	50,976	25,000	750,000	16,600	560,000
Yuba	83,148	31,572	2,840	62,634	10,670	348,300
Totals.....	2,703,148	1,071,082	361,351	8,805,411	223,217	5,293,442

TABLE OF STATISTICS—Compiled from the Official Reports of County Assessors—Continued.

COUNTIES.	OATS.		RYE.		CORN.		BUCKWHEAT.		PEAS.	
	Acres.....	Bushels.....	Acres.....	Bushels.....	Acres.....	Bushels.....	Acres.....	Bushels.....	Acres.....	Bushels.....
Alameda.....	1,000	4,000	.....	.....	.....	.....	.....	.....	16	320
Amador.....	110	3,300	5	70	720	28,800	.....	.....	.....	.....
Butte.....	350	10,500	.....	.....	100	3,000	.....	.....	.....	.....
Calaveras.....	143	1,942	.....	.....	13	537	.....	.....	.....	.....
Colusa.....	.....	.....	.....	.....	792	.....	.....	.....	.....	.....
Contra Costa.....	.....	87,551	.....	200	.....	.....	.....	.....	.....	.....
Del Norte.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
El Dorado.....	2,083	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fresno.....	.....	.....	.....	.....	160	3,200	.....	.....	.....	.....
Humboldt.....	491	23,490	.....	.....	56	1,400	.....	.....	.....	.....
Klamath.....	265	3,975	35	455	.....	.....	.....	.....	6	120
Lake.....	459	11,475	.....	.....	616	12,320	.....	.....	20	500
Los Angeles.....	50	1,000	10	250	1,500	60,000	.....	.....	.....	.....
Marin.....	3,001	60,000	.....	.....	.....	.....	.....	.....	.....	.....
Mariposa.....	200	1,000	.....	.....	.....	.....	.....	.....	4	.....
Mendocino.....	5,700	170,000	100	2,000	2,000	60,000	50	700	100	.....
Merced.....	.....	.....	42	830	550	14,760	.....	.....	.....	.....

Monterey	300	9,000	.....	.....	600	12,000	75	2,250	50	1,200
Mono .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Napa	441	13,230	110	.....	1,215	.....	30	.....	23	.....
Nevada .....	.....	300	.....	.....	.....	200	.....	.....	.....	.....
Placer	80	3,274	4	.....	6	.....	.....	.....	.....	.....
Plumas .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sacramento	1,674	25,625	10	2,000	265	8,295	.....	.....	15	.....
San Bernardino .....	.....	.....	50	1,000	100	4,000	.....	.....	.....	.....
San Diego .....	.....	.....	5	.....	100	.....	.....	.....	.....	6
San Francisco .....	.....	1,200	.....	.....	.....	.....	.....	.....	.....	200
San Joaquin	1,800	36,000	700	1,400	650	19,500	580	11,600	20	1,200
San Luis Obispo .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Mateo	4,500	180,000	.....	.....	.....	.....	.....	.....	50	.....
Santa Barbara .....	.....	2,500	.....	.....	.....	1,500	.....	.....	.....	.....
Santa Clara	2,000	60,000	.....	.....	500	20,000	.....	.....	.....	.....
Santa Cruz	941	26,493	.....	.....	148	3,986	.....	.....	.....	.....
Shasta	900	13,150	.....	.....	500	10,000	.....	.....	.....	.....
Sierra .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Siskiyou	2,100	63,000	40	1,000	150	6,000	10	300	40	1,200
Solano	500	25,000	12	300	20	600	.....	.....	20	.....
Sonoma	4,477	173,685	.....	.....	2,652	80,463	.....	.....	.....	.....
Stanislaus .....	.....	.....	130	3,000	135	6,000	.....	.....	.....	.....
Sutter	85	950	.....	.....	800	14,000	.....	.....	.....	.....
Telama	100	5,000	.....	.....	.....	.....	.....	.....	.....	.....
Trinity	75	2,000	.....	.....	6	108	.....	.....	2	50
Tulare	200	8,000	.....	.....	1,000	33,000	.....	.....	.....	.....
Tuolumne	763	312	87	.....	95	.....	.....	.....	11	.....
Yolo .....	.....	.....	75	3,000	150	6,000	.....	.....	50	2,500
Yuba	1,819	30,640	.....	.....	1,840	68,500	.....	.....	.....	.....
Totals	36,607	1,057,592	1,415	15,505	17,339	478,169	745	14,850	427	7,196

TABLE OF STATISTICS—Compiled from the *Official Reports of County Assessors*—Continued.

COUNTIES.	BEANS.		POTATOES.		SWEET POTATOES.		ONIONS.		HAY.	
	Acres.....	Bushels.....	Acres.....	Bushels.....	Acres.....	Bushels.....	Acres.....	Bushels.....	Acres.....	Tons.....
Alameda.....	.....	.....	800	50,000	.....	.....	200	5,400	2,050	4,000
Amador.....	12	260	115	9,200	2	240	.....	.....	5,780	6,180
Butte... ..	8	.....	30	5,250	20	6,000	.....	.....	8,500	10,000
Calaveras.....	16	.....	87	1,829	.....	.....	.....	.....	4,323	5,218
Colusa.....	18	.....	.....	.....	.....	.....	.....	.....	8,221	.....
Contra Costa.....	.....	5,791	.....	8,000	.....	.....	.....	.....	.....	.....
Del Norte.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
El Dorado.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fresno.....	1	15	4	371	4	520	.....	.....	900	1,050
Humboldt.....	.....	.....	457	27,680	.....	.....	.....	.....	.....	.....
Klamath.....	.....	.....	25	2,500	.....	.....	.....	.....	.....	.....
Lake.....	.....	.....	22	2,500	2	200	2	375	2,001	2,966
Los Angeles.....	150	4,500	70	700	6	600	5	100	250	400
Marin.....	20	.....	1,225	133,500	.....	.....	.....	.....	1,800	3,600
Mariposa.....	5	.....	50	5,000	.....	.....	10	2,000	2,000	3,000
Mendocino.....	30	.....	6,000	.....	.....	.....	30	.....	16,000	30,000
Merced.....	230	2,560	175	4,750	10 $\frac{3}{4}$	830	.....	.....	1,837	2,470

Monterey.....	400	6,000	425	170,000	.....	.....	10	400	3,000	6,500
Mono.....	25	.....	.....	.....	.....	.....	.....	.....	.....	8,224
Napa.....	.....	.....	.....	.....	.....	.....	.....	.....	7,254	900
Nevada.....	.....	.....	300	.....	.....	.....	.....	.....	.....	1,850
Placer.....	.....	.....	8	.....	.....	.....	.....	.....	2,200	1,877
Plumas.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sacramento.....	19	.....	374	129,000	125	23,000	160	25,550	9,104	11,725
San Bernardino.....	10	500	20	2,000	.....	.....	10	500	300	600
San Diego.....	25	.....	10	.....	.....	.....	15	.....	.....	600
San Francisco.....	37	751	160	17,200	.....	350	42	2,042	1,260	1,840
San Joaquin.....	20	1,600	1,200	120,000	10	500	100	8,000	43,724	49,780
San Luis Obispo.....	800	50,000	200	8,000	.....	.....	.....	.....	.....	.....
San Mateo.....	300	.....	1,200	144,000	.....	.....	.....	.....	6,000	6,000
Santa Barbara.....	.....	10,500	.....	1,500	.....	.....	.....	300	.....	800
Santa Clara.....	.....	.....	700	7,000	.....	.....	.....	.....	20,000	30,000
Santa Cruz.....	1,144	9,861	430	79,095	.....	.....	.....	.....	3,159	5,561
Shasta.....	.....	.....	250	8,000	.....	.....	.....	.....	3,000	3,000
Sierra.....	.....	.....	41	26,000	.....	.....	.....	.....	60	125
Siskiyou.....	100	3,000	400	24,000	.....	.....	50	20,000	5,300	9,000
Solano.....	30	.....	400	40,000	320	48,000	160	80,000	44,890	44,890
Sonoma.....	35	250	3,398	185,375	.....	.....	.....	.....	10,330	17,337
Stanislaus.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,233
Sutter.....	.....	600	125	9,900	.....	1,400	.....	1,200	11,900	9,400
Tehama.....	.....	5,000	125	12,500	.....	.....	50	6,250	.....	.....
Trinity.....	.....	.....	60	6,000	.....	.....	.....	.....	360	449
Tulare.....	150	3,000	250	20,000	150	12,000	20	600	100	200
Tuolumne.....	.....	.....	170	23,224	.....	.....	7	.....	4,260	2,061
Yolo.....	25	.....	350	.....	10	.....	30	.....	.....	.....
Yuba.....	14	336	124	14,400	.....	.....	.....	.....	10,468	14,850
Totals.....	3,624	104,524	20,771	1,298,474	659½	93,640	901	152,717	250,464	304,791

TABLE OF STATISTICS—Compiled from the Official Reports of County Assessors—Continued.

COUNTIES.	FLAX.		HEMP.		TOBACCO.		ALFALFA.		COTTON.		RICE.	
	Acres	Pounds	Acres.....	Pounds.....	Acres.....	Pounds	Acres	Tons.....	Acres.....	Pounds ,	Acres.....	Pounds
Alameda
Amador
Butte.....	17	.....	.....	.....	.....	.....	.....	.....
Calaveras.....
Colusa	50	.....	.....	.....	.....	.....
Contra Costa
Del Norte.....
El Dorado
Fresno
Humboldt
Klamath
Lake.....	4	.....	3	9	.....	.....	.....	.....
Los Angeles	3	3,000	.....	.....	.....	.....	.....	.....
Marin
Mariposa
Mendocino	10	1,500	.....	.....	.....	.....	.....	.....
Merced	45	60	.....	.....	.....	.....

TABLE OF STATISTICS—Compiled from the Official Reports of County Assessors—Continued.

COUNTIES.	Acres of Sugar Cane.....	Acres of Broom Corn.....	Pounds of Butter.....	Pounds of Cheese.....	Dozens of Eggs.....	Pounds of Wool.....	Bee Hives.....	Pounds of Honey.....
Alameda.....		100	3,800	2,700	16,700	32,600	284	3,000
Amador.....	20	15					175	
Butte.....							164	
Calaveras.....		120		20,000	8,000	109,334	363	
Colusa.....		6					500	
Contra Costa.....							264	
Del Norte.....								
El Dorado.....				500	5,500	29,000	168	2,100
Fresno.....				12,162	6,860		210	
Humboldt.....			37,638				65	650
Klamath.....							284	7,775
Lake.....			30,250	55,150	30,850	5,097		
Los Angeles.....		30	7,100	1,100	10,000	41,000		
Marin.....			200,000	300,000		28,800	129	
Mariposa.....			1,500	750	15,000	5,000	40	1,900
Mendocino.....							75	
Merced.....			7,360	50	8,690	183,760	537	11,310

Monterey	6	23,000	67,540	45,000	529,836	150	1,250
Mono.....							
Napa.....	87	60,323	2,000	31,000	27,425	1,575	1,025
Nevada						206	
Placer.....							
Plumas							
Sacramento.....		48,931	75,120	28,225	32,860	1,161	8,754
San Bernardino.....	10	20,000	10,000	50,000	15,000	500	5,000
San Diego.....		7,000	4,000	11,000	21,000		
San Francisco.....						25	
San Joaquin.....	50	100,000	7,000	225,000	100,000	1,924	30,000
San Luis Obispo.....							
San Mateo.....		150,000	75,000	6,000			
Santa Barbara		8,000	2,500	16,000	330,000	150	1,500
Santa Clara.....	200	35,000	250,000		65,000		
Santa Cruz.....		44,000	25,910	30,641	10,200	720	500
Shasta.....		20,000	1,500	7,000	18,000	200	10,000
Sierra.....		800		400	50	2	• 100
Siskiyou.....	15	67,000	13,000	34,000	2,000	85	1,890
Solano.....	10	48,960	40,000	15,000	532,371	240	12,000
Sonoma	893	191,400	66,700	105,717	46,010	1,033	700
Stanislaus.....	20				136,500	829	2,496
Sutter.....	130	45,830		44,600	82,340	430	8,000
Tehama	5	4,985	680	45,670	75,000	225	2,250
Trinity.....		3,975	1,600	390		27	
Tulare.....	15	60,000	30,000	260,000	141,447	1,112	1,101,200
Tuolumne.....				11,500		179	1,322
Yolo	40				34,200	905	
Yuba	15			11,540	160,000	850	24,600
Totals.....	1,722	1,226,852	1,064,962	1,080,283	2,793,830	15,766	1,239,322

TABLE OF STATISTICS—Compiled from the Official Reports of County Assessors—Continued.

LIVE STOCK.

COUNTIES.	Horses—American.....	Horses—Spanish (Tame) ..	Horses—Spanish (Wild)...	Horses—Total Number....	Mules	Asses	Cows.....	Calves.....	Stock Cattle.....	Beef Cattle.....
Alameda	9,650	3,000	.....	.....	.....	.....	18,500	4,000	.....	8,000
Amador .....	.....	.....	.....	1,674	190	44	1,980	1,110	2,700	.....
Butte	2,375	1,830	1,725	5,935	1,050	125	2,150	1,075	2,350	630
Calaveras	328	1,722	190	2,240	344	72	3,117	1,791	4,275	.....
Colusa .....	.....	.....	.....	5,206	843	4	7,323	6,457	23,534	.....
Contra Costa.....	.....	.....	.....	4,239	470	3	.....	.....	23,953	.....
Del Norte .....	.....	.....	.....	100	57	.....	190	145	465	.....
El Dorado .....	.....	.....	.....	3,093	1,351	48	3,058	1,197	3,900	.....
Fresno	153	1,356	2,248	3,757	103	70	433	241	55,913	.....
Humboldt .....	.....	.....	.....	2,035	593	8	5,456	7,188	3,730	.....
Klamath .....	.....	127	.....	.....	217	5	156	100	1,176	.....
Lake.....	.....	.....	.....	1,629	39	5	1,261	1,100	7,291	.....
Los Angeles.....	210	3,100	8,200	11,510	1,070	340	11,000	8,000	14,000	6,000
Marin.....	427	1,478	1,680	3,585	78	.....	8,095	6,500	20,692	1,824
Mariposa	150	850	.....	1,000	276	59	174	1,001	5,000	.....
Mendocino	600	900	1,200	2,700	200	6	10,300	4,500	4,200	400
Merced.....	.....	.....	.....	3,013	241	6	.....	15,335	37,212	.....

Monterey.....	825	1,850	4,800	7,475	375	70	4,702	.....	85,000	.....
Mono.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Napa.....	.....	.....	.....	6,070	2,027	8	2,878	2,000	3,071	2,025
Nevada..	784	.....	.....	.....	153	90	1,520	.....	2,076	.....
Placer.....	.....	.....	.....	2,195	470	18	2,241	673	8,490	.....
Plumas.....	.....	.....	.....	3,314	754	62	2,116	.....	7,428	.....
San Bernardino .....	.....	.....	.....	4,378	385	15	4,655	3,495	7,148	.....
San Bernardino	150	500	1,000	1,650	200	100	1,500	1,500	6,000	1,000
San Diego.....	20	1,300	2,789	4,109	375	100	1,100	4,500	11,156	1,550
San Francisco.....	.....	.....	.....	3,800	358	275	5,440	621	.....	.....
San Joaquin.....	4,525	5,000	4,900	14,425	2,500	37	10,500	5,000	80,350	400
San Luis Obispo .....	.....	3,000	5,000	8,000	200	.....	500	.....	.....	.....
San Mateo.....	424	1,532	407	2,363	58	30	3,300	2,000	4,624	3,000
Santa Barbara.....	40	2,760	5,559	8,359	124	24	.....	.....	.....	.....
Santa Clara.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Santa Cruz.....	.....	.....	.....	2,203	65	.....	2,375	.....	10,000	.....
Shasta.....	1,000	600	.....	.....	300	25	2,000	1,000	4,000	3,000
Sierra.....	51	.....	.....	.....	175	.....	99	4	.....	105
Siskiyou.....	927	1,548	.....	2,475	715	23	2,830	1,810	8,415	.....
Solano.....	.....	.....	.....	5,573	328	12	3,278	2,200	14,484	.....
Sonoma.....	1,166	2,333	3,103	7,600	348	9	11,760	7,678	11,288	3,763
Stanislaus.....	477	1,100	2,500	4,077	226	4	2,732	900	31,117	.....
Sutter.....	2,015	1,901	630	4,546	508	2	300	1,501	4,000	600
Tehama.....	1,870	2,000	1,740	5,610	.....	.....	4,531	2,265	4,748	1,699
Trinity.....	.....	.....	.....	241	276	11	226	175	284	100
Tulare.....	943	3,807	1,000	4,807	411	95	25,664	12,000	22,000	10,665
Tuolumne.....	430	1,071	.....	1,501	517	173	1,970	1,229	.....	1,457
Yolo.....	.....	.....	.....	4,806	392	7	.....	.....	.....	.....
Yuba.....	.....	.....	.....	3,000	2,300	108	2,850	2,250	8,400	400
Totals	29,540	44,665	48,671	164,293	21,762	2,093	175,260	112,541	544,470	46,618

TABLE OF STATISTICS—Compiled from the *Official Reports of County Assessors*—Continued.

COUNTIES.	LIVE STOCK—Continued.									
	Oxen.....	Total Number of Cattle....	Sheep	Goats.....	Hogs.....	Chickens.....	Turkeys	Ducks.....	Geese.....	Guinea Fowls.....
Alameda.....	.....	30,500	72,000	.....	6,340	.....	.....	.....	.....	.....
Amador.....	473	6,263	6,770	476	4,876	13,916	994	635	347	.....
Butte.....	475	6,675	42,730	150	28,000	36,200	850	430	285	.....
Calaveras	683	9,866	11,062	640	4,654	13,666	941	1,195	357	.....
Colusa.....	151	37,465	54,667	117	14,970	8,793	5,638	298	157	.....
Contra Costa.....	762	.....	25,715	.....	.....	.....	.....	.....	.....	.....
Del Norte.....	168	.....	800	26	391	445	.....	12	.....	.....
El Dorado.....	1,263	.....	2,138	651	4,220	.....	.....	.....	.....	.....
Fresno	213	56,800	43,353	1,321	7,692	4,953	170	30	.....	.....
Humboldt.....	772	17,146	584	41	5,498	5,161	178	.....	83	.....
Klamath	74	2,506	356	23	457	959	25	.....	.....	.....
Lake	194	9,846	3,871	15	5,500	12,250	3,029	364	210	.....
Los Angeles.....	800	39,800	31,000	320	2,000	8,000	250	300	200	.....
Marin.....	988	38,099	9,618	75	2,623	9,000	623	908	425	.....
Mariposa	750	7,925	2,500	200	3,000	10,000	5,000	100	50	.....
Mendocino.....	700	20,100	9,000	300	25,000	.....	.....	.....	.....	.....
Merced	53	.....	56,618	206	5,114	6,013	487	89	53	.....

TABLE OF STATISTICS—Compiled from the Official Reports of County Assessors—Continued.

COUNTIES.	STOCK SLAUGHTERED.					
	CATTLE.		HOGS.		SHEEP.	
	Number....	Value.....	Number.....	Value.....	Number.....	Value.....
Alameda.....	3,000	.....	1,000	.....	5,000	.....
Amador.....	4,973	\$49,730	3,084	\$21,672	2,560	\$5,120
Butte.....	.....	.....	.....	.....	.....	.....
Calaveras.....	2,905	43,575	2,661	21,288	1,934	3,868
Colusa.....	.....	.....	.....	.....	.....	.....
Contra Costa.....	.....	.....	.....	.....	.....	.....
Del Norte.....	.....	.....	.....	.....	.....	.....
El Dorado.....	.....	.....	.....	.....	.....	.....
Fresno.....	.....	.....	.....	.....	.....	.....
Humboldt.....	.....	.....	.....	.....	.....	.....
Klamath.....	700	1,400	300	1,800	356	1,068
Lake.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	4,100	.....	1,000	.....	5,000	.....
Marin.....	1,200	.....	500	.....	700	.....
Mariposa.....	8,000	48,000	5,500	11,000	5,000	10,000
Mendocino.....	.....	.....	.....	.....	.....	.....
Merced.....	.....	.....	.....	.....	.....	.....

Monterey.....	1,085	8,680	205	820	470	940
Mono.....						
Napa.....						
Nevada.....						
Placer.....						
Plumas.....						
Sacramento.....	400	4,000	300	600	500	1,000
San Bernardino.....						
San Diego.....	36,500		25,550		54,750	
San Francisco.....	4,890	51,180	2,720	19,540	4,400	7,800
San Joaquin.....	2,000		100		500	
San Luis Obispo.....			400	2,000	1,400	2,000
San Mateo.....	1,800	18,000	100	100	7,200	7,200
Santa Barbara.....	4,000	24,000				
Santa Clara.....						
Santa Cruz.....						
Shasta.....						
Sierra.....						
Siskiyou.....	3,000	45,000	2,500	20,000	1,000	2,400
Solano.....	2,450		1,200		3,100	
Sonoma.....						
Stanislaus.....	1,200	14,400	1,000	7,000	2,000	1,500
Sutter.....						
Tehama.....	2,820		3,813		6,000	
Trinity.....	1,624	32,480	932	5,592	500	1,500
Tulare.....	1,095	8,760	800	4,800	700	1,400
Tuolumne.....	8,785	141,750	7,870	75,000	9,700	19,400
Yolo.....						
Yuba.....	8,240	114,750	6,480	40,000	10,640	21,280
Totals.....	104,767	\$618,305	68,015	\$231,212	123,410	\$86,476

TABLE OF STATISTICS—Compiled from the Official Reports of County Assessors—Continued.

IMPROVEMENTS.								
GRIST MILLS.								
COUNTIES.	Number.....	Steam Power	Run of Stone.....	Value of Steam Grist Mills.....	Water Power	Run of Stone.....	Value of Water Power Mills.....	Bushels of Grain Ground
Alameda	4	3	14	\$40,000	1	4	\$8,000	81,000
Amador.....	3	1	3	5,000	2	4	5,000	68,000
Butte	4	1	2	2,500	3	6	29,200	.....
Calaveras .....	.....	.....	.....	.....	.....	.....	.....	.....
Colusa	2	2	2	.....	.....	.....	.....	.....
Contra Costa.....	2	2	4	10,000	.....	.....	.....	50,000
Del Norte.....	2	1	3	4,000	1	2	2,000	7,400
El Dorado.....	2	.....	.....	.....	2	4	3,500	20,300
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt	4	2	.....	.....	2	.....	.....	.....
Klamath	1	.....	.....	.....	1	2	10,000	10,000
Lake	3	.....	.....	.....	3	3	3,000	4,000
Los Angeles.....	8	.....	.....	.....	8	11	.....	53,000
Marin .....	.....	.....	.....	.....	.....	.....	.....	.....
Mariposa.....	.....	.....	.....	.....	.....	.....	.....	.....
Mendocino.....	2	.....	.....	.....	2	2	4,500	.....
Merced	4	.....	.....	.....	4	8	9,600	29,000

TABLE OF STATISTICS—Compiled from the Official Reports of County Assessors—Continued.

COUNTIES.	IMPROVEMENTS—Continued.					
	SAW MILLS.					
	Number	Value	Steam Power.....	Water Power.....	Number of feet of Lumber sawed...	Shingles.....
Alameda	11	\$17,000	10	1	9,000,000	1,000,000
Amador	19	34,700	12	7	7,040,000	1,212,000
Butte.....	15	27,600	8	7	.....	.....
Calaveras	2	.....	1	1	.....	.....
Colusa.....	.....	.....	.....	.....	.....	.....
Contra Costa.....	2	.....	1	1	75,000	.....
Del Norte	36	.....	23	13	19,000,000	.....
El Dorado	4	10,800	1	3	50,000	.....
Fresno	7	.....	.....	.....	14,968,955	5,000,000
Humboldt	2	50,000	.....	2	.....	200,000
Klamath	3	.....	1	2	600,000	.....
Lake.....	.....	.....	.....	.....	.....	.....
Los Angeles	1	.....	1	.....	.....	.....
Marin	10	40,000	10	.....	15,000,000	250,000
Mariposa	9	199,000	6	3	30,000,000	.....
Mendocino .....	.....	.....	.....	.....	.....	.....
Merced .....	.....	.....	.....	.....	.....	.....

Monterey .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mono .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Napa	4	.....	.....	3	1	.....	720,000	.....	.....
Nevada	32	116,000	.....	20	12	.....	6,430,000	.....	.....
Placer	22	44,200	.....	13	9	.....	2,056,000	.....	.....
Plumas	23	.....	.....	2	21	.....	.....	.....	.....
Sacramento.....	1	4,000	.....	1	.....	.....	600,000	.....	.....
San Bernardino	5	.....	.....	2	3	.....	.....	.....	.....
San Diego .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Francisco	5	.....	.....	5	.....	.....	.....	.....	.....
San Joaquin	1	.....	.....	1	.....	.....	.....	.....	.....
San Luis Obispo .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Mateo	6	.....	.....	.....	.....	.....	3,800,000	.....	20,000,000
Santa Barbara .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Santa Clara	10	.....	.....	3	7	.....	9,500,000	.....	.....
Santa Cruz	9	.....	.....	3	6	.....	4,960,000	.....	.....
Shasta	14	56,000	.....	1	13	.....	7,000,000	.....	.....
Sierra	16	32,200	.....	6	10	.....	5,441,000	.....	80,000
Siskiyou	15	25,500	.....	2	13	.....	2,500,000	.....	300,000
Solano .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sonoma	3	.....	.....	3	.....	.....	690,000	.....	.....
Stanislaus .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sutter .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tehama	1	2,500	.....	.....	1	.....	1,500,000	.....	.....
Trinity	6	.....	.....	.....	6	.....	755,000	.....	.....
Tulare	1	2,000	.....	1	.....	.....	.....	.....	.....
Tuolumne	22	33,000	.....	8	14	.....	10,000,000	.....	.....
Yolo	2	.....	.....	2	.....	.....	700,000	.....	.....
Yuba	23	60,400	.....	17	6	.....	14,000,000	.....	65,000
Totals	342	\$754,900	.....	167	162	.....	166,385,955	.....	28,107,000

TABLE OF STATISTICS—Compiled from the Official Reports of County Assessors—Continued.

COUNTIES.	IMPROVEMENTS—Continued.									
	QUARTZ MILLS.			MINING DITCHES.			FERRIES.		TOLL BRIDGES.	
	Number	Value	Number of tons of Quartz crushed..	Number	Value..	Miles in Length...	Number	Value	Number..	Value..
Alameda.....	32	.....	56,100	13	\$144,000	592	4	\$3,000	1	\$2,000
Amador .....	.....	.....	.....	.....	.....	.....	7	5,300	2	20,800
Butte	40	\$47,805	.....	58	196,728	514	5	4,050	3	7,500
Calaveras .....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....
Colusa .....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Contra Costa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Del Norte.....	.....	.....	.....	2	700	11	.....	.....	1	200
El Dorado.....	5	.....	.....	60	.....	662	.....	.....	9	.....
Fresno .....	.....	.....	.....	.....	400	3	6	5,000	.....	.....
Humboldt .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Klamath.....	1	.....	20,000	31	.....	34	2	1,500	2	2,500
Lake .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	1	.....	4	.....	.....	.....	.....
Marin .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mariposa	20	2,000,000	100,000	10	4,500	50	3	1,500	.....	.....
Mendocino .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merced .....	.....	.....	.....	.....	.....	.....	3	1,500	.....	.....

Monterey.....							5	4,000	1	2,500
Mono.....										
Napa.....							1			
Nevada.....	21								9	
Placer.....	5		63,000						3	5,000
Plumas.....	28								2	
Sacramento.....							4		7	
San Bernardino.....	2						5			
San Diego.....	1						1			
San Francisco.....	1									
San Joaquin.....										
San Luis Obispo.....										
San Mateo.....										
Santa Barbara.....										
Santa Clara.....										
Santa Cruz.....										
Shasta.....	2									
Sierra.....	8									
Siskiyou.....	6									
Solano.....										
Sonoma.....										
Stanislaus.....										
Sutter.....										
Tehama.....										
Trinity.....										
Tulare.....	7									
Tuolumne.....	30									
Yolo.....										
Yuba.....	3									
Totals.....	192	\$2,279,605	286,385	481	\$1,339,428	4,300	111	\$214,150	80	\$166,200

TABLE OF STATISTICS—Compiled from the Official Reports of County Assessors—Continued.

COUNTIES.	IMPROVEMENTS—Continued.							
	TURNPIKE ROADS.				RAILROADS.			
	Number.....	Miles in Length...	Cost	Income	Cost of Repairs...	Number.....	Miles in Length...	Cost
Alameda.....	.....	.....	.....	.....	.....	.....	.....	.....
Amador.....	2	53	.....	\$800	.....	.....	.....	.....
Butte.....	.....	.....	.....	.....	.....	.....	.....	.....
Calaveras.....	.....	.....	.....	.....	.....	.....	.....	.....
Colusa.....	.....	.....	.....	.....	.....	.....	.....	.....
Contra Costa.....	.....	.....	.....	.....	.....	.....	.....	.....
Del Norte.....	1	58	.....	.....	.....	.....	.....	.....
El Dorado.....	17	126	.....	.....	.....	.....	.....	.....
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt.....	.....	.....	.....	.....	.....	.....	.....	.....
Klamath.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....	.....	.....
Marin.....	.....	.....	.....	.....	.....	.....	.....	.....
Mariposa.....	4	15	\$30,000	7,200	\$1,800	1	3	\$15,000
Medocino.....	.....	.....	.....	.....	.....	.....	.....	.....
Merced.....	1	6	4,000	.....	.....	.....	.....	.....

TABLE OF STATISTICS—Compiled from the *Official Reports of County Assessors*—Continued.

HORTICULTURAL PRODUCTS.—NUMBER OF TREES AND VINES.

COUNTIES.	Apple	Peach	Pear.....	Plum.....	Cherry.....	Nectarine.....	Quince.....	Apricot.....
Alameda.....	150,000	3,000	10,500	.....	2,053	.....	.....	.....
Amador.....	32,000	36,300	5,319	3,144	1,758	1,378	840	1,410
Butte.....	17,270	112,500	7,175	1,934	1,130	5,700	380	3,760
Calaveras	29,610	26,252	5,110	2,519	1,051	1,011	746	1,131
Colusa.....	11,727	29,385	2,371	2,271	2,360	1,122	76	721
Contra Costa.....	33,720	30,885	8,536	2,751	1,770	.....	1,000	1,000
Del Norte.....	1,732	.....	720	100	264	.....	.....	.....
El Dorado.....	80,427	44,289	8,741	5,908	1,474	875	1,110	1,200
Fresno	1,150	2,575	160	85	96	.....	.....	22
Humboldt.....	17,600	9,968	630	975	417	.....	147	245
Klamath.....	1,443	740	75	200	129	17	15	25
Lake.....	7,673	5,186	969	678	157	107	39	203
Los Angeles.....	2,500	14,000	715	400	370	281	708	1,500
Marin.....	25,926	812	355	150	105	.....	126	304
Mariposa.....	4,000	7,000	500	1,600	201	378	106	260
Mendocino	13,000	9,000	3,000	1,600	700	200	200	300
Merced	4,009	4,375	1,176	281	81	134	52	185

Monterey	1,780	850	480	350	120	60	80	75
Mono	99,282	90,000	14,152	3,975	4,228	1,535	1,065	2,542
Napa	14,350	38,430	4,358	1,350	1,440	399	748	488
Nevada	23,360	40,740	7,521	6,436	6,036	1,400	1,000	1,836
Placer								
Plumas								
Sacramento	65,325	56,547	16,920	5,820	2,944	1,683	3,064	3,314
San Bernardino.....	3,000	5,000	500	500	100	100	150	500
San Diego.....	300	4,000	2,000	200	.....	60	110	120
San Francisco	4,679	428	2,771	196	401	32	71	50
San Joaquin	22,300	19,000	16,000	12,000	1,000	750	300	800
San Luis Obispo	450	1,200	609	75	150	.....	50	25
San Mateo	10,000	3,200	2,500	1,000	900	.....	300	200
Santa Barbara.....	750	1,600	625	350	220	800	225	650
Santa Clara.....	150,000	44,481	41,500	9,800	5,400	750	3,500	3,000
Santa Cruz.....	33,765	3,090	2,159	1,829	1,135	80	188	462
Shasta.....	15,000	30,000	3,000	1,000	1,000	1,000	200	1,000
Sierra	1,625	2,400	406	40	77	28	25	12
Siskiyou	3,710	1,805	110	884	450	83	15	42
Solano.....	5,384	26,920	4,080	3,160	3,050	3,000	2,100	4,400
Sonoma	140,478	71,910	12,913	10,102	4,149	841	1,249	2,683
Stanislaus	2,556	3,975	642	260	321	400	.....	440
Sutter	9,980	12,500	2,000	10,000	400	460	100	1,010
Tehama.....	5,761	15,650	490	1,100	360	185	130	515
Trinity	4,993	3,471	1,366	236	86	20	44	26
Tulare	25,000	37,000	4,000	3,500	3,000	250	250	2,200
Tuolumne	23,750	41,111	4,967	1,871	243	167	294	315
Yolo.....	31,400	88,500	13,300	9,500	2,264	20,000	1,810	4,808
Yuba	38,540	84,630	6,800	4,800	4,500	8,220	1,400	6,600
Totals.....	1,171,305	964,705	212,212	115,030	58,090	53,506	24,013	50,379

TABLE OF STATISTICS—Compiled from the *Official Reports of County Assessors*—Continued.

HORTICULTURAL PRODUCTS.—NUMBER OF TREES AND VINES—Continued.															
COUNTIES.	Fig.....	Aloe.....	Citron	Lemon	Orange	Olive.....	Pomegranate.....	Pine Apple.....	Prune	Persimmon	Pecan	Cherimoya	Almond	Walnut.	
Alameda.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	814	72	
Amador	258	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	200	.....
Butte	980	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	316	62	
Calaveras	650	.....	.....	6	19	2	120	.....	26	.....	.....	.....	280	.....
Colusa.....	90	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Contra Costa.....	425	.....	.....	30	30	.....	.....	.....	.....	.....	.....	.....	.....	.....
Del Norte.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	10	
El Dorado.....	451	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	462	.....
Fresno.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Klamath	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45	.....
Los Angeles.....	1,200	.....	109	500	4,000	1,100	870	.....	40	.....	.....	.....	420	1,000	
Marin	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30	.....
Mariposa	150	.....	.....	.....	.....	.....	25	.....	.....	.....	.....	.....	36	.....
Mendocino	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merced	157	.....	.....	.....	5	.....	6	.....	.....	.....	.....	.....	14	5	

TABLE OF STATISTICS—Compiled from the *Official Reports of County Assessors*—Continued.

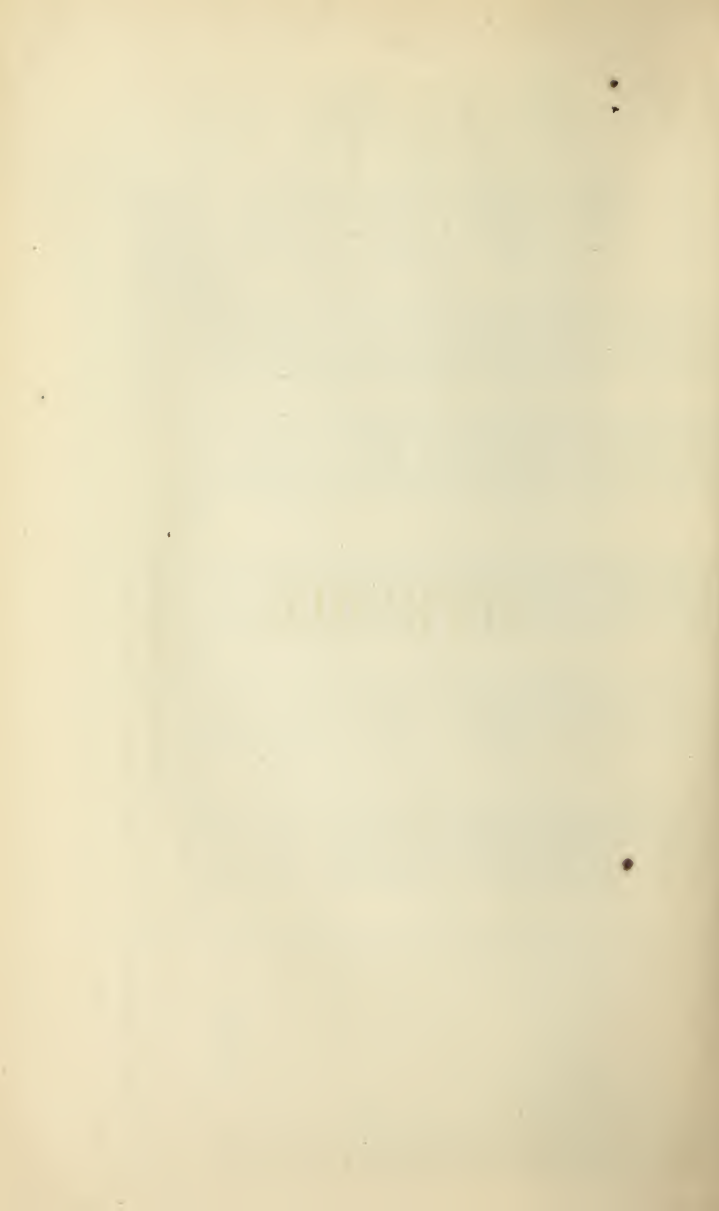
COUNTIES.	HORTICULTURAL PRODUCTS.—NUMBER OF TREES AND VINES—Continued.							
	Filbert.....	Gooseberry.....	Raspberry.....	Strawberry.....	Grape.....	Tons of Grapes.....	Gallons of Wine.....	Gallons of Brandy.....
Alameda.....	121,670	311,140	.....	.....	.....
Amador.....	2,256	3,170	400,000	.....	.....	2,740	.....
Butte.....	1,450	1,960	54,058	300,049	310,000	.....	.....
Calaveras.....	1,697	6,105	.....	39,284	.....	2,367	40
Colusa.....	79	.....	.....	184,200	.....	.....	.....
Contra Costa.....
Del Norte.....	100	.....	100	1,000	.....	.....	.....	.....
El Dorado.....	772,547	.....	.....	.....
Fresno.....	6	250	8,000	.....	.....	.....
Humboldt.....	8,630	6,300	11,800	.....	.....	.....	.....
Klamath.....	1,000	180	3,700	1,625	.....	.....	2,000
Lake.....	100	65	.....	5,595	.....	.....	.....
Los Angeles.....	50	400	200	4,000	2,570,000	3,100	280,000	150,000
Marin.....	4,900	20,000	.....	.....	.....
Mariposa.....	50	3,000	60,500	50,000	125	10,000	1,000
Mendocino.....	25,000	.....	.....	.....
Merced.....	102	620	308	45,630	.....	300	.....
.....	8,050

Monterey.....	750	460	4,500	3,480					
Mono.....									
Napa.....	6,175	10,323	9,528	540,828					
Nevada.....	1,500	500	20,000	21,336		2,891		300	
Placer.....	400	7,000	200,000	135,532					
Plumas.....									
Sacramento.....	8,586	12,878	18,126	412,092		5,568			38,000
San Bernardino.....	150	50	500	500,000		2,000		1,000	20,000
San Diego.....	40	200	1,500	70,000					
San Francisco.....	1,707	2,089	3,390	107					
San Joaquin.....	2,100	16,000	87,500	300,000					
San Luis Obispo.....									
San Mateo.....									
Santa Barbara.....	100	150	400	4,500					
Santa Clara.....	4,900	500	100,000	115,000		3,300		650	
Santa Cruz.....	2,268	2,133	34,250	600,000		7,000		500	25,000
Shasta.....	1,000	1,800	40,000	32,675					6,663
Sierra.....	48	205		45,400					10,000
Siskiyou.....	450	915	5,210	5,374					
Solano.....	1,000		10,000	4,100					
Sonoma.....	14,151	14,972	65,653	400,000					
Stanislaus.....				1,701,661		15,041		650	23,635
Sutter.....				9,983					
Tehama.....	630	870	35,000	19,850		2,600		180	
Trinity.....	300	134	22,000	30,000		1,500			13,605
Tulare.....	3,000	6,000	160,000	520					2,000
Tuolumne.....	1,079	713		225,000		1,000		200	
Yolo.....				197,300		6,570		2,057	
Yuba.....	2,650	3,850	155,600	234,430		600		700	
				650,450					
Totals.....	50	103,498	1,588,643	10,592,688	337,762	343,477	7,277		\$329,033

TABLE OF STATISTICS—Compiled from the Official Reports of County Assessors—Continued.

COUNTIES.	ASSESSED VALUE OF PROPERTY.				INCREASE OR DECREASE IN VALUE OF PROPERTY.		
	Real Estate.....	Improvements.....	Personal Property	Total Valuation of Property.....	Assessed Value of Property for 1861.....	Increase	Decrease.....
Alameda.....	\$3,000,000	.....	\$1,100,000	\$4,100,000	\$4,169,834	.....	\$69,834
Amador	1,155,040	.....	1,032,668	2,187,708	2,616,872	.....	429,164
Butte	1,604,357	.....	1,346,194	2,950,551	3,811,119	.....	860,568
Calaveras.....	2,624,312	\$1,191,044	1,433,268	5,248,624	2,737,708	\$2,510,916	.....
Colusa.....	.....	.....	.....	2,643,809	2,643,809	.....	.....
Contra Costa.....	920,000	.....	920,000	1,840,000	1,952,395	.....	112,395
Del Norte.....	58,235	87,595	154,605	300,435	433,707	.....	133,272
El Dorado.....	463,260	1,341,049	2,058,340	3,862,649	3,794,120	.....	.....
Fresno	197,454	.....	708,958	962,985	1,045,895	68,529	.....
Humboldt	320,725	291,705	740,360	1,352,790	1,308,801	43,987	82,910
Klamath	1,072	1,200	289,372	291,645	365,487	.....	73,842
Lake.....	72,356	41,180	199,710	313,246	373,401	.....	60,155
Los Angeles	1,160,190	.....	1,048,505	3,065,330	3,065,330	.....	.....
Marin.....	1,089,633	75,523	652,997	1,817,553	1,755,893	61,660	.....
Mariposa.....	671,064	.....	865,266	1,536,330	1,367,823	168,507	.....
Mendocino.....	273,870	341,294	550,338	1,165,502	646,469	519,043	.....
Merced.....	313,287	.....	652,934	966,221	1,092,803	.....	126,582
Monterey.....	406,802	146,046	744,567	1,297,422	1,475,094	.....	177,672
Mono.....	.....	.....	.....	310,896	310,896	.....	.....
Napa.....	.....	.....	.....	2,937,760	3,179,752	.....	241,992

Nevada.....	2,273,397	2,781,973	5,055,370	4,225,085	830,285	.....
Placer.....	989,953	2,088,878	3,225,248	3,225,248	.....	.....
Plumas.....	.....	.....	1,070,000	904,418	165,582	.....
Sacramento.....	5,471,225	3,348,793	8,822,018	12,076,003	.....	3,255,983
San Bernardino.....	.....	.....	417,238	417,238	.....	.....
San Diego.....	1,18,020	282,111	471,806	471,806	.....	.....
San Francisco.....	36,990,654	29,540,553	66,531,207	42,362,242	24,168,965	.....
San Joaquin.....	1,379,043	2,125,319	4,670,194	4,598,375	71,819	.....
San Luis Obispo.....	234,721	278,021	512,742	805,005	.....	292,263
San Mateo.....	1,507,359	658,207	2,165,366	1,401,711	763,655	.....
Santa Barbara.....	426,730	392,675	819,405	1,038,645	.....	219,240
Santa Clara.....	2,671,825	1,890,227	6,038,375	5,012,670	1,025,705	.....
Santa Cruz.....	647,018	439,900	1,086,918	713,895	373,023	.....
Shasta.....	125,000	1,167,948	1,364,998	1,564,998	.....	200,000
Sierra.....	.....	.....	1,159,205	1,159,205	.....	.....
Siskiyou.....	533,000	1,100,000	1,653,000	2,404,199	.....	751,199
Solano.....	1,963,784	1,637,387	3,601,171	3,882,700	.....	281,529
Sonoma.....	1,665,733	1,483,050	3,990,677	4,697,063	.....	706,386
Staatslaus.....	265,278	502,780	708,058	846,298	.....	78,240
Sutter.....	658,312	994,396	1,946,076	2,532,324	.....	586,248
Tehama.....	789,731	1,124,018	2,013,749	2,086,213	.....	72,464
Trinity.....	.....	851,794	1,166,414	1,325,917	.....	159,503
Tulare.....	372,667	893,821	1,266,488	1,034,341	232,147	.....
Tuolumne.....	151,425	1,225,100	2,742,450	2,742,450	.....	.....
Yolo.....	.....	.....	2,322,975	2,156,482	166,493	.....
Yuba.....	1,221,272	2,289,061	5,022,424	6,187,773	.....	1,165,349
Totals.....	\$72,523,807	\$71,331,494	\$169,053,028	.....	\$31,170,319	\$10,186,790
Total Increase.....	.....	.....	.....	.....	10,186,790	\$20,983,529



APPENDIX.



REPORTS OF COUNTY SURVEYORS.

FRESNO COUNTY.

J. C. WALKER.....County Surveyor.

OFFICE COUNTY SURVEYOR, }
Millerton, July 1st, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General :

SIR:—In compliance with instructions contained in your circular, I have the honor to submit the following report of the effects of the recent floods in this county.

The extreme height of the San Joaquin above low water at Millerton, was about twenty-six feet, which was on January eleventh.

The greatest height at Fresno City, which is at the head of navigation on the San Joaquin, was about sixteen feet above low water, and the general depth over the adjacent lands at that place was four feet.

The land which was overflowed in this county is so extensive that it would be very difficult for me to ascertain the approximate quantity of it.

Some bars were formed, and a change of channel occasioned for a short distance, at different places in the San Joaquin.

There is considerable deposit upon the submerged lands in this county, and varies from half an inch to one foot in depth. It was washed from the rich soil in the low hills, and it has improved the quality of the land.

The San Joaquin and King's rivers have been very high the present season, from the thawing of snow in the mountains. I have made inquiries of men living in various parts of the county, and have learned from them that many crops have been destroyed the present summer by being overflowed on land which was reported as high.

My business has not called me away from home sufficiently to gain a

very extensive information concerning the effects of the recent floods. I trust you will therefore excuse me for my meagre report.

Very respectfully, your obedient servant,

J. C. WALKER,
County Surveyor.

HUMBOLDT COUNTY.

J. B. KNISELYCounty Surveyor.

OFFICE COUNTY SURVEYOR,
Eureka, Nov. 27th, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In accordance with the law defining the duties of County Surveyors, I respectfully submit the following:

Since my term of office my business has been so limited that I have no regular report to make as I would wish. Owing to the great Indian difficulties, property is depreciating in value, and many of our citizens are leaving in consequence of Indian troubles, which does not seem likely to subside soon. Whatever work I may have I will prepare for my next report.

As to the table of statistics required by your instructions, I shall have to refer you to the report of the Assessor of this county, as my business has not called me from home enough to collect material for a report of my own.

Respectfully submitted.

J. B. KNISELY,
County Surveyor.

LAKE COUNTY.

JOEL WILLARD.....County Surveyor.

OFFICE COUNTY SURVEYOR,
Lake County, July 3d, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In accordance with law and instructions, I herewith submit the following:

Not having made any surveys for individuals, I have nothing in that line to report upon.

I have received one application for Swamp Land, dated April seventeenth, eighteen hundred and sixty-two, a plat and field notes of which I transmitted to your office, since when I have heard nothing of it. You will oblige me, as well as the applicant, by stating whether it has been

received, and if so, whether it has been approved, and why not sent back to me.

In regard to the information required of County Surveyors in your circular of February thirteenth, eighteen hundred and sixty-two, I have collected the following information:

First—The extreme height of water at the head of Clear Lake was, as near as I can determine, about eleven feet.

Second—Date of highest water, January twenty-second, eighteen hundred and sixty-two.

Third—From one inch to five feet, the farms in the valleys around the lake being all more or less submerged.

Fourth—Outside of the line of segregation of Swamp and Overflowed Lands, probably between ten and fifteen thousand acres.

Fifth—The banks of streams have not been seriously affected.

Sixth—No bars have been formed or channels changed at the head of the lake, where the principal streams that feed the lake put into it.

Seventh—The deposit varies according to the current, in many places it is washed, and left in eddies from one to four feet deep; as a general thing the lands will be benefited, the deposit being a fine sand, the finer and clayey parts being carried into the lake.

Eighth—I can answer this question better next October, the water now being only about six inches lower than high water mark of previous winters, made since the settlement of the valley by Americans.

Very respectfully, your obedient servant,

JOEL WILLARD,
County Surveyor.

MARIN COUNTY.

A. D. EASKOOT.....County Surveyor.

OFFICE COUNTY SURVEYOR,
San Rafael, Nov. 15th, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In reply to your circular under date of February thirteenth, eighteen hundred and sixty-two, in regard to the flood in this county, I beg leave to report:

The highest tide in this county was in the month of January, eighteen hundred and sixty-two. The extreme highest above low water mark was about eight feet. The depth of water on the marshes was about three and a half feet. The deposit on the submerged land was a light soil, to the depth of about one inch, except at the mouths of the mountain streams, where they intersect the marshes; there the deposits were stone, gravel, and sand, to the depth of about two feet. The navigable streams that run through these marshes were partly obstructed by the deposits, and some small bars were formed, but not so large as to stop navigation.

I subjoin a list of School Land warrants surveyed in accordance with

the provisions of an Act approved April twenty-second, eighteen hundred and sixty-one, entitled an Act amendatory of and supplemental to an Act entitled an Act to provide for the location and sale of the five hundred thousand acres of land granted to this State for school purposes, and the seventy-two sections donated to this State for the use of a seminary of learning, approved April twenty-third, eighteen hundred and fifty-eight, and the Act amendatory thereof, approved February eighteenth, eighteen hundred and fifty-eight. I have surveyed as a portion of the grant of the sixteenth and thirty-sixth sections, for school purposes, the following tracts of land :

Survey No. 1.—Surveyed March twenty-seventh, eighteen hundred and sixty-two, for Joseph Irwin, being for the northwest quarter of the west half of the northeast quarter of Section 30, Township No. 5, North, Range 9, West, containing two hundred and forty acres.

Survey No. 2.—Surveyed April fourth, eighteen hundred and sixty-two, for George W. Burbank, being for the east half of the southeast quarter, and southeast quarter of the northeast quarter, Section 19, and the southwest quarter of the northwest quarter and southwest quarter, Section 20, Township No. 5, North, Range 9, West, containing three hundred and twenty acres.

Survey No. 3.—Surveyed April eighth, eighteen hundred and sixty-two, for William Burkland, being for the southwest quarter and west half of southeast quarter and southwest quarter of northeast quarter, Section 19, Township No. 5, North, Range 9, West, containing two hundred and eighty acres.

Survey No. 4.—Surveyed April first, eighteen hundred and sixty-two, for Andrew Manning, being for the northeast quarter, Section 26, and the west half of northwest quarter, Section 25, Township 5, North, Range 10, West, containing two hundred and forty acres.

Survey No. 5.—Surveyed March twenty-ninth, eighteen hundred and sixty-two, for William Vanderbilt, being for the fractional south half of the northeast quarter, and fractional southeast quarter, Section 36, Township No. 5, North, Range 10, West, containing two hundred and six and ninety-nine one-hundredths acres.

Survey No. 6.—Surveyed March twenty-ninth, eighteen hundred and sixty-two, for William Vanderbilt, being for the fractional northeast quarter, Section 1, Township No. 4, North, Range 10, West, containing seventy-six and sixty-one one-hundredths acres.

Survey No. 7.—Surveyed March twenty-eighth, eighteen hundred and sixty-two, for Alexander S. Marshall, being for the southwest quarter, Section 29, Mount Diablo meridian, containing one hundred and sixty acres.

All the above described land is claimed under a Spanish grant, and has been confirmed by the United States District Court, but it has been appealed to the Supreme Court of the United States, and the settlers think it will be decided in their favor.

COUNTY ROADS.

This county has done a great deal towards improving our county roads. Within the last year bridges have been built and roads made; and if the roads should remain where they are at present located for two or three years, I have no doubt but we shall have roads that can be travelled in the rainy season without endangering our lives.

My confidence in my proposed road law, which will be found in my

report of last year, is undiminished, and I commend it to your careful consideration, being well assured that until it shall have been adopted, we will not have any roads; for I think when a county road is viewed and surveyed, it should be made a permanent location, and not be changed except it be found absolutely necessary. Many times, changes have been made in our county roads for no other purpose than to benefit some private individual, to the inconvenience of the public.

No Swamp and Overflowed Land surveyed since my last report.
All of which is respectfully submitted.

Very respectfully, your obedient servant,

A. D. EASKOOT,
County Surveyor.

SAN JOAQUIN COUNTY.

GEORGE E. DREW.....County Surveyor.

OFFICE COUNTY SURVEYOR, }
Stockton, Dec. 3d, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General :

DEAR SIR:—In compliance with my duties and instructions from your office, I herewith transmit my report of work done by this office for the year ending December first, eighteen hundred and sixty-two.

SWAMP AND OVERFLOWED LANDS.

During the year, I have made thirty-five surveys, numbering eight hundred and fifteen to eight hundred and forty-eight, inclusive, covering an area of seven thousand seven hundred and fifty-eight and thirty-nine one-hundredths acres; of this amount, seventeen surveys, including an area of three thousand two hundred and fifty-one and sixty-four one-hundredths acres, were re-surveys of old locations, which have been forfeited and relinquished. In consequence of the great flood of last winter, it will be observed that a very limited number of surveys have been made, as our citizens are now very timid about investing in the tule lands.

SCHOOL LAND UNDER OLD WARRANTS.

Of these, I have made nine locations, numbering four to twelve inclusive, under warrants numbers six hundred and fifty-one, six hundred and fifty-seven, seven hundred and ninety-nine, eight hundred, eight hundred and one, eight hundred and two, two hundred and fifty-three, one hundred and eighty-one, five hundred and eighty-five, two hundred and seventy-seven, five hundred and fifty-one, six hundred and forty-seven, eight, sixty-six, and seventy-three, including an area of three thousand two hundred acres, the warrants having all been surrendered.

SCHOOL LAND LOCATIONS IN LIEU OF SIXTEENTH AND THIRTY-SIXTH SECTIONS ON UNSURVEYED LANDS.

Of this class I have made thirty-six surveys, numbering one to thirty-six, inclusive, including an area of ten thousand one hundred and five and forty-nine one-hundredths acres.

The above is the total amount of work done and necessary to be returned to your office.

I have received a circular from your office, propounding eight questions, having reference to the floods of last winter. By personal examinations and inquiry I have endeavored to collect such information as was possible, and will give you only such as may be reliable, as in many cases it is so conflicting as to be unavailable.

First—The highest water in Stockton was on the twenty-fourth day of January, eighteen hundred and sixty-two, being twelve feet one inch above the low tide of this date; December third, ten feet six inches above the high tide of this date, and three feet six inches above the highest water in the flood of eighteen hundred and fifty-two. About fifteen miles northwest from this city, in Township 3, North, Range 5, East; the highest water was on the twenty-fourth day of January, being fourteen feet higher than the summer low tides.

In Township 1, South, Range 5, East, twelve miles from this city, in a southwesterly direction, and near the forks of the San Joaquin river, the highest water was, on the twenty-fourth day of January, twelve feet above the summer low tides, and five feet above the highest water of eighteen hundred and fifty-two.

Second—The first heavy flow of water, from the east or mountain streams, occurred on the twenty-sixth day of December, on which day the city was slightly submerged. On the twenty-eighth day of December, the water in the city was a few inches higher than on the twenty-sixth.

On the eleventh day of January occurred the greatest overflow of the country to the northeast, east, and southeast, caused by the water from the mountain streams. The highest water in this city and on the land to the west, was on the twenty-fourth day of January, being twenty-four inches higher than on the eleventh of January. This was back water, and came from the north, or Sacramento river; no current near the city. A short distance to the west of the city, on this and several subsequent days, there was a strong current running past the city from the north, and running nearly due south, to a point six miles south from this city, there meeting the waters of the San Joaquin, and changing the direction of the current to a northwest course.

Third—It is difficult to answer this question satisfactorily. I believe about two-thirds of our entire county was inundated. Of the agricultural and grazing portion, about one half. Over this portion the water would average one and a half to two feet in depth.

Fifth—The banks of the streams have not been seriously affected.

Sixth—No considerable bars or changes of channel have been occasioned by the flood.

Seventh and Eighth—There was no large amount of deposit left on the agricultural portion—perhaps an average of two inches—except at a few points on the river bottoms. This deposit was a very fine sand or *slum*, and to the most of our land was an advantage. It is impossible to tell the amount of deposit there may be on the tule lands, as they are still submerged.

The greatest danger we have of a recurrence of the events of last winter is from the waters of the Sacramento and American rivers breaking over the plains to the north, as it was the waters from those rivers which caused the greatest amount of damage in this vicinity. Aside from the Sacramento water, the damage in this vicinity would not have exceeded ten thousand dollars.

Several propositions have been made to protect the city from another inundation. I have made one survey and estimate for a canal and levee around the city on three sides, about three and a half miles in length, estimated cost, one hundred and ten thousand dollars, which plan was objected to on account of its cost. I have also made an examination of an entire new channel for the Calaveras, the earth taken from the channel to be placed in embankment for a turnpike road. This would protect the middle and southwesterly portion of the county, then by raising the grades in the lower portion of the city two feet, and we are safe. This plan would also involve the expenditure of a larger amount of money than our county and city authorities feel justified in expending. In fact, no protective plan can be adopted that will not cost a large amount of money, as it would be useless to do the work in a cheap manner.

I would be happy to inform you that we are making rapid progress in road making, but such is not the fact. Some improvements have, however, been made, and I am in hopes it is but the beginning of a good work..

Of railroads, we have several in embryo, but none in course of construction, so far as I am informed. A thorough survey and estimate has, however, been made from this city to Copperopolis.

By the present law relative to county officers, the County Surveyors retire from office on the first Monday in October next following the election, while all other officers hold over until the next April. There is no good reason for this, and I would respectfully suggest to you to propose an amendment to the revenue law including County Surveyors.

There are many other things of which I would like to speak or write, but have already occupied too much paper, and will therefore forego them.

All of which is respectfully submitted,

GEORGE E. DREW,
County Surveyor of San Joaquin County.

SOLANO COUNTY.

JOHN PEABODYCounty Surveyor.

OFFICE COUNTY SURVEYOR,
Fairfield, Dec. 10th, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—The undersigned, County Surveyor of Solano County, reports according to law, to-wit:

SWAMP AND OVERFLOWED LANDS.

Surveyed and Returned Land.	Aeres.
Up to December, eighteen hundred and sixty-one, at which time I transmitted to your office a map of all the Swamp and Overflowed Lands, there had been surveyed and returned to your office about	69,210
Surveyed and returned since.....	6,162
Total surveyed and returned.....	75,372

I have now finished the survey of the Swamp and Overflowed Land in Townships 3 and 4, North, Range 2, West, lying between Suisun bay and Suisun slough and the high land of the Suscol Ranch, and shall transmit the papers as soon as the calculations are made. That piece will contain about thirteen thousand five hundred acres. After this, there will only remain unsurveyed of the Swamp and Overflowed Lands about seven thousand two hundred acres, lying for the most part in Township 5, North, Range 3, East. I have affidavits for a portion of this land, and will survey it as soon as the high tule can be burnt, thereby finishing the survey of all the Swamp and Overflowed Lands in this county, except a small portion on Pablo Bay and Napa river.

LOCATION OF SCHOOL WARRANTS, (FIVE HUNDRED THOUSAND ACRE ACT.)

Up to this date I have located only seven thousand eight hundred and forty acres. There have been a large quantity of locations made anteriorly, but of which I have no data.

SIXTEENTH AND THIRTY-SIXTH SECTIONS.

The number of acres taken as the sixteenth and thirty-sixth sections, or in lieu thereof, and which have been returned to the different Locating Agents, is about eighty-one thousand acres, the almost totality being on unsurveyed land. This large sale of land has been occasioned by the rejection, this spring, of the Suscol grant, in which alone about forty-five thousand acres have been taken.

About a mode of reclaiming the Swamp and Overflowed Lands above Cache slough I can at present give you no information, but will do so as soon as I will be able to survey in Township 5, North, Range 3, East, which will be in a month from now. In the meantime I may say, that from former information, a canal will be necessary to drain the waters of Cache creek and Putah river, but where to locate it I cannot now say.

As to the height of the waters above low water mark in the last flood, it was impossible for me to keep any memorandum of it; but I have been told that at the head of Cache slough, at a place called Main Landing, the water was ten feet above the ground, which would make it about eighteen feet above low water mark. In the marshes around Suisun City, the greatest height attained was only about two feet six inches, which would give about nine or ten feet above low water mark. In the islands in Suisun Bay the water did not rise more than six inches above the

marsh, and that only at the highest tides. All these islands were covered with cattle, and they continued on them all winter without the least inconvenience, and have been doing all the time exceedingly well.

In your letter of the twenty-eighth of November last, accompanying your circular, you mention the washing away of Baca's house on Putah river. I never heard of it, but, however, it is possible, as that house was built very near the bank and immediately below a ford, and the least overflow of the river would wash any adobe building.

JOHN PEABODY,
County Surveyor, Solano County.

YOLO COUNTY.

AMOS MATHEWS.....County Surveyor.

OFFICE COUNTY SURVEYOR,
Washington, Dec. 2d, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In accordance with the law I transmit the following report:

Yolo County, as any map of the State indicates, is bounded on the east by the meanderings of the Sacramento river for a distance of nearly one hundred miles; on the south by the Township line between Townships 5 and 6, North, and by the centre of Putah creek; on the West by the Range line between Ranges 2 and 3, East, and by the main ridge of the Coast Range Mountains; on the north by the Township line between Townships 12 and 13, North. The agricultural portion of the county includes about two hundred and fifty-five thousand six hundred acres. The grazing portion, including the swamp district, occupies about two hundred and thirty-four thousand acres. The Coast Mountains terminate in a succession of out hills, losing themselves in the level plain.

Cache creek, the outlet of Clear Lake, is a mountain stream of pure water to its debouch from the mountains, where it receives the turbid waters from numerous arroyos, and during the rainy season continues a rapid muddy stream to a point within three miles of the Sacramento river, where it spreads over the flat and low swamp known as the Tule.

The debouch of Putah creek is about on the line of Section 30, Township 8, North, Range 1, West. This stream is a counterpart of Cache creek, and likewise sinks in the tule. Water may be obtained from these creeks at a light expense for the complete irrigation of the dry lands. There is a gradual decline in the face of the country toward the river to a point about one and a half miles from the bank, where is found the lowest point. I found, in making a survey for a road west from Sacramento, the lowest point in the tule is but about thirteen feet below the river bank. At the lower end of the county, I am of the opinion the deepest part of the swamp is not more than eight feet below the river bank.

The natural outlet for the tule water is through the numerous sloughs making inland from Steamboat slough, above the town of Rio Vista. From Cache creek, extending to the river at Knight's Landing, is the old bed of a slough, supposed to have once been the continuation of

Cache creek. The banks of this slough are high. No water during the late great flood passed over this natural barrier. Above this point, running about parallel with the river bank, is the Sycamore slough, extending northward into Colusa County. This slough is the natural but inefficient outlet to the tule water which comes partly from the mountains and partly from the overflow of the river. A great part of this water must await evaporation during the series of dry years. Previous to eighteen hundred and sixty-one, the tule lands were the almost sole pasture of the immense herds of cattle then in the county; and they had, within the knowledge of residents, receded from earlier limits to the extent of more than a mile. The unprecedented flood of last year swept away whatever of improvements had been placed upon these lands. But confidence is again being established in their availability for agricultural and grazing purposes.

I am of the opinion that such a flood as the last has not occurred within the last hundred years, and, perhaps, never since the Great Flood receded from the land. The evidence upon which I found my opinion, in part, is the undoubted fact, that many years ago, the banks of the Sacramento were inhabited by populous tribes of Indians, who have disappeared from the face of the earth. In witness, we see the numerous mounds scattered along the river bank through the whole valley. These mounds must be very old; some of them had large oak trees, grown from acorns carelessly thrown aside by this extinct race. These mounds, till within a year, retained their shape as left by the aborigines; there could be seen the excavation scooped out where stood the principal hut, with numerous smaller cavities, used for like purposes. Now the flood has destroyed the original shape of the mounds, and we see but a heap of earth strewn with the skulls which, for centuries, had lain covered with the light ashes and mould of which the mounds were composed. Some say the Indians did inhabit the valley, but were destroyed by a great flood, wherefore we do not find their descendants; but all of us have seen just such mounds on high lands, where no modern flood has ever reached; and the apparent age of these mounds indicates their inhabitants to have been coeval with those who lived along the river. The mounds are of the lightest material, and accumulated slowly, in long years, from ashes and decayed vegetable matter. In my opinion, if floods had often occurred, they would have been washed away ages ago. In one place on the river I saw an innumerable number of skulls, the mound in which they were buried having been almost entirely swept away. In many places great oak trees, centuries old, have been uprooted and carried away. The Indians have no knowledge of any disaster which happened to their ancestors by reason of floods, and their traditions must certainly extend back a hundred years, as many of them have lived three quarters of that time.

In the valley, away from the Sacramento river, are small streams upon whose banks the early Spaniards built their adobe houses. In one such case, whose history is verified by many men, the last winter's flood carried away the houses which stood above all thought of floods, for twenty-five years. I mentioned the last fact as one upon which we can reasonably rely. I spoke of the material of which the mounds are composed, that you may see they could not withstand a great current of water. I spoke of the mounds as evidence that the Sacramento valley is inhabitable. I spoke of the great age of these mounds as showing the valley not to have been submerged so lately as many believe. It is needless for me to say we require levees and canals. The Sacramento valley

is composed of the sediment which, from creation, slowly washed from the mountain sides and settled in the lake, which, I imagine, one day bordered on the foot hills. The heaviest of this sediment settled near the mountains, the lighter further down towards the bay, or what I suppose to have been the outlet to the lake. This process was continued through time till the lake became shallow; the points near the mountains still more rapidly filling up, the slope was finally established from the mountains to the sea, which gave current through the centre of the shallow lake. This current threw sediment along its eddies, which, in time, became the banks of the Sacramento river. If the course of nature had been allowed to go on, the low lands would have been gradually filled, the banks of the river gradually raised, accumulating faster near the mountains, till, in time, the river would have gained sufficient fall to have carried, by its rapid current, without overflow, all the waters from the mountains. But, unfortunately, we prematurely found the El Dorado, and ever since have sought to guide nature in her work of reclamation; and we must so guide her henceforth.

In reply to your request for statistics of the late flood, I can state, perhaps, but little not generally known. This county was pretty generally overflowed, either by the river or by the rush of water from the coast mountains. The greatest depth of water in the tule, west from Sacramento, was about fifteen feet. Considerable quantities of sediment were deposited. I think we should ask to know how the water stood at different points with reference to the river when its banks were full, with no regard to height above low water mark. The river, at this point, rose about two feet above its banks; fifteen miles farther down, about three feet; and at Rio Vista, where the incline plane of the river meets the horizontal plane of the Bay, it rose nearly eight feet. There was but little current in the river during the flood. The water, as is natural, ran where was the greatest fall; that is, where there is a fall of one in sixteen by the tortuous course of the river, there may be a fall of one in four on a direct line. In one instance, the counter current carried a barn two miles up the river, and deposited it on the opposite bank, where it now stands. To reclaim the valley, we must adopt a general system. I think the present reclamation law needs some radical changes. The surveys obtained under it are, perhaps, worth all they cost. Under the law, we must permanently reclaim a district, or let it alone altogether. We cannot cut a drain which would render the worst swamp fit for grazing, unless the Engineer reports that the district will be permanently reclaimed. Some Engineers have been forced to do so, most of them have refused, and so but little is accomplished. I think the executive of the Swamp Land Department should be given more authority. I think money should be expended for partial reclamation. To do this with success, a thorough system for the main valleys must be adopted. There must be a thorough survey, unless from the detached surveys a general system can be determined upon. The executive of the department should have power to direct works for reclamation, without regard to persons immediately interested as land holders. Without a general system, we will be, by the breaking of detached levees from time to time, inundated, or if the levees stand, the water will be forced into some unnatural channel, and thus render all insecure. It has been proposed, and, I think, with wisdom, that an additional outlet be made, from the Sacramento river to the Bay. I believe such a channel might be made sufficiently large to carry a great portion of the waters of the upper Sacramento, and also the waters of Cache and Putah creeks, which

would, perhaps, permanently reclaim the main tule in this county. I judge, if this policy were adopted, the river should be tapped above the mouth of Feather river, and its waters carried into an arm of Suisun Bay. This Bay rose scarcely higher this year than at other times. The supposition that the Straits of Carquinez would not let the water pass as rapidly as it accumulated, is, as you know, entirely erroneous. If a channel is to be cut for the purpose of relieving the Sacramento, it will be a work in which the whole Sacramento valley is interested. This county will be but little more interested than Sutter, Sacramento, San Joaquin, and Solano Counties. Any survey, with such an object in view, the Board of Swamp Land Commissioners have no power to order. If it is desirable to cut away an obstruction in the channel of any stream, the Board find no authority in the law. Our valleys will always have to be guarded, and it is proper that we take measures thus early for the systematic construction of all improvements. I would, therefore, respectfully ask you to consider and recommend some practical amendments to the reclamation law.

Respectfully yours,

AMOS MATHEWS,
County Surveyor.

—
STOCKTON, December 26th, 1862.

Hon. J. F. HOUGHTON,
Surveyor-General:

DEAR SIR:—In response to your questions in relation to the late flood, I have obtained from Mr. J. D. Morley, of Stanislaus County, the following replies in relation to the effects of the flood in that county, and also certain other information which is thereto appended:

First—The extreme height above low water mark at well designated points upon the Tuolumne and Stanislaus rivers, was twenty feet, but where the Tuolumne river flows through the mountains, the extreme height was fifty or sixty feet. The extreme height above low water mark at well designated points on the Merced river and Dry creek, was fifteen or sixteen feet.

Second—The water attained its greatest height on the tenth or eleventh of January, eighteen hundred and sixty-two.

Third—The lands in Stanislaus County adjacent to the Tuolumne, Stanislaus, and San Joaquin rivers, and Dry creek, were overflowed to the depth of eight or ten feet.

Fourth—All lands bordering upon streams in Stanislaus County were overflowed. The Tuolumne and Stanislaus rivers overflowed land to the width of about a mile; the San Joaquin, in Stanislaus County, overflowed lands to the width of from five to twenty miles. Persons living upon lands overflowed by that stream, only saved their lives by fleeing to the mountains and high lands. Dry creek overflowed lands to the width of from one-quarter to two miles.

Fifth—The banks of the Tuolumne and Stanislaus rivers have been very seriously affected by washing; in some places the width has been increased from two hundred to fifteen hundred feet; and whenever those

rivers rise five or six feet, there will be three or four channels at different points, all occasioned by the washing of the late floods. The banks of the San Joaquin are very little changed, the river retaining its original channel. Tuolumne river, by changing its channel and overflowing its banks, has destroyed many ranches by washing away the soil.

Sixth—The Tuolumne and Stanislaus rivers have changed their channels in many places, and large sand bars have been formed in those rivers. The San Joaquin retains its original channel, and there are no bars to obstruct the navigation.

Seventh—There was a deposit of light sandy material upon most of the submerged lands in Stanislaus County, varying in depth from six inches to four feet.

Eighth—Upon the Swamp and Overflowed Lands in Stanislaus County the depth of water was about ten feet, the current running west-north-west. The deposit was less than upon some of the higher lands, varying in depth from four inches to two feet, the deposit upon submerged lands near the mountains and low hills being always greater than upon the lower lands. The deposit upon the Swamp Lands was more of a vegetable character than that upon the higher lands.

Nine tenths of the crops upon the Tuolumne and Stanislaus rivers were destroyed, and many houses were swept off; a general destruction of fencing occurred; many cattle and horses perished in the flood; the destruction of timber was very great, caused entirely by the soil being washed away from the roots of the trees by the immense volume and velocity of the water. Many of the ferry-boat landings were entirely destroyed by washing of the banks, changes of channel, and formation of bars.

In relation to Merced County, on the Merced river the effects of the flood were very similar to those occasioned by the Tuolumne and Stanislaus rivers.

The effects of the flood in Mariposa County, generally, in consequence of the face of the country being more hilly, were, that so great an area was not overflowed, and the injuries were confined principally to mining improvements upon the banks of the Merced river and various creeks—the water rising as much as fifty or sixty feet above low water mark.

At such times as I receive information in relation to the flood, I will send it to you.

Yours respectfully,

W. H. LYONS.

BRANCHE'S FERRY, Stanislaus County, }
December 5th, 1862. }

W. H. LYONS, Esq.:

DEAR SIR:—In answer to your note of the first instant, I would state that it gives me great pleasure to impart any information in my power regarding the subjects mentioned in the Surveyor-General's circular:

First—On the Tuolumne river, at this point, (Section 35, 3, South, 13, East,) the extreme height was about thirty feet above low water mark, and about seven feet higher than the high water mark of the flood of eighteen hundred and fifty-one and eighteen hundred and fifty-two.

Second—About meridian, on the tenth of January, eighteen hundred

and sixty-two. On Saturday, the eleventh, at twelve o'clock, it having fallen three or four feet in the interval, it was a few inches lower.

Third—From seven to twenty feet.

Fourth—All the bottom lands on the Tuolumne river, from bluff to bluff. I should think that ten times as much land was submerged as lies within the United States meandering posts.

Fifth—The banks of the river have all been washed away; in some places to the extent of five or six rods.

Sixth—Old bars were washed away, and new ones formed. The channel was changed every half mile, in many instances sweeping away all the bottom lands, in others, cutting a new channel through the centre of a ranch.

Seventh—In some instances the flood left large deposits on the land of a light sandy character, unfit to sustain vegetable life. The flood appears, in most cases, to have swept off the soil and original deposits to the depth of from five to twenty feet, and as the water subsided, to have deposited sand and loose gravel of various depths.

Eighth—I can only state that I believe that nearly every acre of overflowed land within the United States meandering lines on the Tuolumne river has been swept away, or rendered valueless by a deposit of sand, as the water fell.

In reply to the concluding clause of your letter I would state that no flood of like character and extent has occurred on the Pacific slope for many hundred years. The evidences in support of this conclusion are to be found in the facts that the land washed away along the river banks was originally formed from alluvial deposits, in some places ten or twelve feet above the bed rock, where the Indians had for years bruised the acorns and seeds for food, forming dozens of small and large holes in the rock. The period of time occupied in forming ten or twelve feet of deposit, including a foot or two of soil, geologists can determine. Upon that deposit grew oak trees from five to ten feet in diameter, washed up and carried down the stream. Some of them must have been more than three hundred years old. In some places the hearts of large oak trees can now be seen lying on the bed rock where ten or twelve feet of the original deposit has been washed down stream.

My ranch, as well as those of many of my neighbors, were rendered nearly valueless by the sweeping away of the soil and depositing afterwards of loose gravel and fine sand, which the wind blows hither and thither as it changes.

In a hurried manner I have given you all the information thought of at this moment; any further questions answered with pleasure.

I should estimate the damage caused by the flood on the Tuolumne river, from Jacksonville to its mouth, at not less than one hundred and fifty thousand dollars.

Yours respectfully,

LOUIS M. BOOTH, M. D.

REPORTS OF COUNTY ASSESSORS.

BUTTE COUNTY.

S. Y. HALE.....County Assessor..

OFFICE COUNTY ASSESSOR,
Oroville, December 1st, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In accordance with law, I send you my annual report for the present year.

The agricultural business in this county is steadily increasing. The crops this year have generally been good, and the farmers have received fair prices for their grain and hay. Wheat and barley are the principal crops raised.

Tobacco, in small quantities, has been grown in different parts of the county, and wherever planted has produced well.

The Chinese sugar cane has been successfully grown here this year. Mr. F. Phillips, an enterprising farmer on Pine creek, has erected a mill, driven by water power, for crushing the cane, and has succeeded in manufacturing a good article of syrup.

The raising of fruit trees and grape vines is yearly increasing, and we have already many large orchards and vineyards in full bearing. But the insecurity of land titles in this county has been a great drawback to that branch of business.

This county, in common with the other stock raising counties, suffered severely in the loss of cattle last winter, which has been the cause of the falling off of the assessable property, compared with last year. Farmers and stock raisers are now turning their attention more to raising horses and sheep, and are improving the breeds of each.

The keeping of bees is attracting the attention of farmers and others, and where proper attention has been paid to them, they have done remarkably well, and have been profitable to the owners.

Mining still continues to pay well; the yield of gold has been greater this year than last, and the miner has been better remunerated for his labor. Tunnel and hydraulic mining is now the principal mining that is

carried on. River and quartz mining is not as good paying business as it has been in years past.

Very respectfully yours,

S. Y. HALE,
Assessor of Butte County.

CALAVERAS COUNTY.

J. THOMPSON AND OTHERS.....Township Assessors.

OFFICE COUNTY ASSESSOR,
Mokelumne Hill, Dec. 6th, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—We beg to enclose to your address herewith the annual report from this county, in compliance with Act of the Legislature.

You will observe there is a small falling off in total amount of assessable property in this county, as shown by the returns made, from the amount of eighteen hundred and sixty-one. This is to be accounted for by the general depreciation and loss arising from the unusually severe winter last past; but for this, we might figure up, perhaps, at least one quarter of a million of dollars more in total value:

Value of Real Estate and Improvements.....	\$1,191,044
Value of Personal Property.....	1,433,268
Total value of Property.....	\$2,624,312

The mines of this county continue to yield their treasures, though not in the great abundance of former years, still in remunerative quantities; but the great feature and ultimate mining interest, and we might say the real basis of our future prosperity and wealth, is our copper mining interests. We are now shipping from the various lodes already opened, not less than four hundred tons of ore per month, which varies in quality from that which assays twenty-five per cent to that which will reach as high as fifty-two or fifty-three per cent in metal. By the return of another year, from the progress made in explorations, we may look for a monthly shipment of at least eight hundred tons. Our busy miners are now at work exposing some of the best lodes to be found in the known world. The lodes run through the county in a southeast and northwest direction in several localities. Those opened at Hog Hill, Copperopolis, Campo Seco, San Domingo, John Bull Diggings, and at several other localities in the county, will place Calaveras at the head of the copper producing counties of the State, and be one of the chief sources of its revenue. And in this connection, we would again urge upon our State authorities the necessity of lending us a helping hand by means of practical scientific knowledge in the speedy development of this large means

of future prosperity to our county, and, as a necessary consequence, to the State.

The extreme winter lately passed was very destructive to our mining ditches and other improvements of like character, so much so that some of the larger ones have been compelled to make an outlay of many thousand dollars to bring them to a condition to pass water through; while many of the small ones were entirely destroyed or rendered valueless; this will account for the decrease in the number as compared with last year's returns.

In agriculture, the county is not, we are sorry to say, making much improvement, while in horticulture, for a mountain county, we think Calaveras will vie with the most advanced. We boast of trees and vines, as follows:

Description.	Number.
Apple.....	29,610
Peach	26,252
Pear.....	5,110
Plum.....	2,519
Cherry.....	1,051
Nectarine.....	1,011
Apricot.....	1,131
Fig	659
Pomegranate.....	120
Almond.....	316
Gooseberry.....	1,697
Raspberry.....	6,105
Currant.....	1,344
Strawberry.....	54,058
Grape vines.....	300,049

Besides many of the more rare specimens, such as lemon, orange, pepper, prune, etc. The quality of fruit produced will bear favorable comparison with that of any other part of the State.

Nevada Territory, and our neighboring County of Mono, are still drawing largely from the wealth and labor of this county, and in the spring of eighteen hundred and sixty-three will take from us an amount of capital and enterprise which, unless replaced from other quarters, may tend to still lessen our taxable property. This, in connection with the generally unsettled titles to valuable districts of agricultural lands—particularly in the foot-hills—will cause property in the mountain counties to be more or less fluctuating until a final title, clear and unclouded, is vested in the occupant.

All of which we respectfully submit for your perusal.

Yours, etc.,

J. THOMPSON, Assessor Fourth Township.

B. K. THORNE, Assessor Fifth Township.

D. S. BATES, Assessor Sixth Township.

S. W. BRIGGS, Assessor Seventh Township.

JOHN GILLILAND, Assessor Eighth Township.

VOLNEY SHEARER, Assessor Ninth Township.

DEL NORTE COUNTY.

GEORGE W. RUSSELL.....County Assessor.

OFFICE COUNTY ASSESSOR,
Crescent City, Sept. 15th, 1862. }Hon. J. F. HOUGHTON,
Surveyor-General:

DEAR SIR:—Herewith please find my report as County Assessor of Del Norte County for the year eighteen hundred and sixty-two.

If it had not been for the appearance of total neglect I would not have made any return at all, having found it impossible to make anything like a correct one. Nearly all the stock was driven out of the county very early in the spring, and that which was left was so left in the hands of agents, who could only account for them in figures, and it is a matter of impossibility for an Assessor to make a report when things are in that state.

Nearly all the farmers left early in the spring for the new mines, leaving their ranches and property in the hands of agents, which agents can only give the taxable value of such ranches and property from figures left with them by the owners previous to leaving, and as for getting any information from them, as is required, it is impossible. Consequently, even my very lame report as rendered I cannot vouch for as correct. Our county at present is truly in a dilapidated condition.

Very respectfully yours,

GEORGE W. RUSSELL,
Assessor of Del Norte County.

EL DORADO COUNTY.

GEORGE McDONALD.....County Assessor.

OFFICE COUNTY ASSESSOR,
Placerville, Nov. 10th, 1862. }Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—I have the honor to transmit the following report, as Assessor of El Dorado County, for the year eighteen hundred and sixty-two:

Total number of acres of land claimed is.....	211,410
Agricultural land.....	30,271
Grazing land.....	181,139
Acres in Wheat.....	178
Acres in Barley.....	1,958
Acres in Oats.....	2,083
Acres in Grass.....	5,122

Number of Apple Trees.....	80,427
Number of Peach Trees.....	44,289
Number of Plum Trees.....	5,908
Number of Cherry Trees.....	1,474
Number of Pear Trees.....	8,741
Number of Apricot Trees.....	1,200
Number of Nectarine Trees.....	875
Number of Quince Trees.....	1,110
Number of Almond Trees.....	462
Number of Fig Trees.....	451
Number of Grape Vines.....	772,547
Number of Wagons.....	990
Number of Buggies.....	69
Number of Carriages.....	15
Number of Harness.....	1,561
Number of Horses.....	2,821
Number of Colts.....	272
Number of Mules.....	1,351
Number of Jacks.....	48
Number of Cows.....	3,058
Number of Calves.....	1,197
Number of Oxen.....	1,263
Number of Stock Cattle.....	3,900
Number of Hogs.....	4,220
Number of Sheep.....	2,138
Number of Goats.....	651
Number of Stands of Bees.....	264
Number of Steam Saw Mills.....	23
Number of Water Power Saw Mills.....	13
Number of feet of Lumber for 1862.....	19,000,000
Value of Lumber.....	\$285,000
Water Power Grist Mills.....	2
Run of Stones.....	4
Value of Mills.....	\$3,500
Bushels of Grain Ground.....	20,300
Value of Grain Ground.....	\$32,750
Number of Toll Roads.....	17
Aggregate length in miles.....	126
Canals and Ditches.....	60
Aggregate length in miles.....	662
Miles of Telegraph line.....	200
Toll Bridges.....	9
Steam Quartz Mills.....	3
Water Power Quartz Mills.....	2
Cement Mills.....	3
Steam Marble Mills.....	1
Soda Factories.....	3
Breweries.....	11
Marble Quarries.....	5
Foundries and Machine Shops.....	1
Money on hand.....	\$316,619
Gold Dust.....	18,216
Money at interest.....	285,160
Solvent Debts.....	229,917

Stocks of Goods.....	\$355,127
Furniture.....	61,055
Total value of Property for 1862.....	3,862,649
Total value of Real Estate.....	463,260
Total value of Improvements.....	1,341,049
Total value of Personal Property.....	2,058,340
Increase over 1861.....	68,529

The unprecedented floods of the past winter destroyed a large amount of property in this as well as other counties in the State. The loss of cattle and other stock was immense, nearly every bridge in the county was swept away, and great damage done to canals, ditches, gardens, saw mills, etc. Under these circumstances it was expected there would be a large decrease in the amount of taxable property as compared with last year. Yet, notwithstanding these reverses, the energy and perseverance of the people of our county are rapidly recovering and repairing the losses. Already the assessments show a small excess over the total valuation of eighteen hundred and sixty-one. I regret being unable to furnish you with much of the valuable information required in your circular of February last. Many and unforeseen difficulties have prevented the collection of much statistical matter. This, it is believed, can, in a measure, be obviated during next season.

The agricultural interests of the county are in a highly satisfactory state, and steadily advancing, more attention being given to horticulture than to the raising of cereals.

Much difficulty attends the assessing of possessory rights to lands at anything above a mere nominal value, all the lands in the county being considered mineral.

The two interests—agriculture and mining—come in frequent collision, and occasion many and vexatious law suits, from the uncertain tenure by which they hold their respective claims.

The brief report I hereby furnish you is far from doing justice to the great and growing resources of El Dorado County; her energies, heretofore devoted almost exclusively to mining, are gradually being directed to other enterprises, and the change of pursuit, it is believed, will result in the highest advantage to our condition, both moral and material.

The successful culture of the vine, and the consequent manufacture of wine, gives promise of an early future when our hillsides, now frowning in barrenness, will be dotted all over with happy homes of contentment and plenty, and our broad acres yield at each returning vintage abundant reward for the patience and toil of the laborer.

GEORGE McDONALD,
Assessor of El Dorado County.

PLACERVILLE, }
Nov. 29th, 1862. }

The foregoing is a true copy of my original report.

GEORGE McDONALD,
Assessor of El Dorado County.

FRESNO COUNTY.

THOMAS J. ALLEN.....County Assessor.

OFFICE COUNTY ASSESSOR,
Millerton, November 4th, 1862. }Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In compliance with law I respectfully submit my report for the current year. Owing to the many difficulties in the way, occasioned by last winter's floods, it is impossible for an Assessor this year to get any accurate information in regard to the statistics of the county.

The area of our county I have no means of arriving at correctly, its boundaries are irregular, as there is a great portion not yet surveyed, and I think there are certain portions of the county line should be ordered surveyed this fall, as it is very hard for an Assessor to know where he is; as he has to go, in many cases, by nothing but imaginary lines, it would also make it more satisfactory to people living close to a line to know for certain what county they are living in. The lines most needed to be run are as follows: the line commencing at the Newton crossing of the Chowchilla, running up as high as inhabited; the said line was run, at the time of the organization of the county, for a short distance up, but was considered incorrect; also, the line on lower Kings river, below Blisses' Ferry, or Kingston, commencing at a point to which the last survey was taken to, running to Tulare Lake, thence from other side of where the line strikes the lake to summit of the Coast Range, or to where this county joins with San Luis Obispo County.

AGRICULTURAL STATISTICS.

Description.	Number.
Land enclosed, acres.....	4,975
Land cultivated, acres.....	3,980
Wheat, acres.....	450
Wheat, bushels.....	8,500
Barley, acres.....	1,000
Barley, bushels.....	19,000
Corn, acres.....	160
Corn, bushels.....	3,200
Beans, acres	1
Beans, bushels.....	15
Potatoes, acres	4
Potatoes, bushels.....	371
Sweet Potatoes, acres	4
Sweet Potatoes, bushels	520
Hay, acres	900
Hay, tons.....	1,050
Cheese, pounds.....	500
Eggs, dozens.....	5,500
Wool, pounds.....	29,000
Honey, pounds	2,100

Fruit Trees and Vines.	Number.
Apple Trees	1,150
Peach Trees.	2,575
Pear Trees	160
Plum Trees.....	85
Cherry Trees.....	96
Apricot Trees.....	22
Fig Trees.....	6
Raspberry Bushes.....	6
Strawberry Vines.....	250
Grape Vines.....	8,000

Live Stock.	Number.
Horses, American.....	153
Horses, Spanish, tame.....	1,356
Horses, Spanish, wild.....	2,248
Total number of Horses.....	3,757
Mules	103
Asses.....	70
Cows.....	433
Calves.....	241
Stock and Beef Cattle.....	55,913
Oxen.....	213
Total number of Cattle.....	56,800
Sheep	43,353
Goats.....	1,321
Hogs.....	7,692
Chickens.....	4,953
Turkeys.....	170
Ducks.....	30
Bee Hives.....	168

Description.	Number.	Value.
Animals slaughtered		\$25,650
Saw mills, steam power.....	1	8,000
Saw mills, water power.....	3	2,800
Lumber sawed, feet.....	50,000	900
Mining Ditches, miles in length.....	3	400
Amount of water, inches.....	80	
Ferries	6	5,000

Description.	Value.
Land and improvements.....	\$197,454 53
Improvements on Public Land.....	56,572 00
Amount of Personal Property.....	708,958 75
Total value of property.....	\$962,985 28
State and County Tax.....	18,297 36

Our county is better adapted at the present time for grazing purposes than farming, although there are thousands of acres of rich land, well adapted for farming purposes, but on account of the drought natural to the country, and no water to irrigate with, it cannot be cultivated. But the time is not far distant, in my opinion, when Fresno County will show by her statistical reports to be not far behind the foremost county in the State for farming. This year there is not much grain raised, it being so wet last winter that many farmers could not plough in time to plant. As a general thing considerable grain is raised for fattening hogs, and considerable cut for hay. It is more profitable to cut for hay than for the grain.

The farming at present is confined to valleys in the mountains and foot-hills, and to the river bottoms, where, as a general thing, the soil is rich and deep, producing well.

Of Swamp and Overflowed Land there is an immense quantity, but as yet nothing has been done to reclaim it. There is considerable of it that would produce well if cultivated.

The increase of live stock since last year has been small, and in some species of stock (as you will see by the report) has run behind, owing to losses occasioned by last winter's floods, and removal of stock from the county.

The mining interest of this county is small compared with the other counties north. As there has been no heavy hill or bank diggings discovered yet, mining is confined to small gulches in the winter season, and the river beds in the summer and fall. The San Joaquin, Fresno, and Chowchilla, are the principal streams worked for gold, although there are quite a number of minor streams which yet afford employment for a number of hands. The bed of the San Joaquin has been but little worked as yet, on account of a large amount of water to contend against, and being late in the season before it is low enough to commence operations, although there have been many claims worked to advantage, paying well, and ground enough left to give employment to many hands for years to come. As the white mining population of the county is small, the diggings are worked mostly by Chinese, who pay considerable revenue to the county.

There is considerable quartz in the county, but it has been prospected very little as yet, although I have seen as rich specimens from veins here as from any section in the State.

The New Idra quicksilver mine, which is located in the lower end of this county, in Coast Range Section, when in operation pays very well, making from ten thousand (\$10,000) to fifteen thousand (\$15,000) dollars

per month, clear of expenses. They keep from two to three hundred men employed at the mines.

The whole line of Coast Range in this county, I think, is rich in mineral. There has been found, silver, lead, copper, coal, and quicksilver, and I think when that part of the county is fully developed it will prove to be one of the richest mining sections in the State.

We have now four saw mills in our county, three are water mills, located on the North Fork of the San Joaquin river—there was but one located there last year, two have been built since—cutting from fifteen hundred to three thousand feet per day to the mill, and, from all appearance, will do a lucrative business. The one that was operating last year, as you will see by the report, sawed but a small amount of lumber, much under the demand; the other mill is steam-power, located on the waters of the Cowee, or Mill creek, and, owing to last winter's flood having cut up the roads so bad, and no person being at the mill, I could not get the information desired, but from the large amount of lumber hauled from there last year, and from what I can learn, leads me to believe that there was a large quantity of lumber sawed. The above mills are all located in the best of timber.

We have some of the finest timber in the world, comprising the sugar, yellow, white, and spruce pine, the fir, and cedar, which grows in inexhaustible forests in the high mountains. The valleys and low hills are timbered with the pitch, or scrub pine, post and white oak, and you may also find a species of live oak, resembling that found in the Atlantic States; and on the creek bottoms grows the cottonwood, willow, ash, and alder; the manzanita grows in great abundance in the low hills, but is very seldom used for any purpose.

We have about seventy-five miles of telegraph running through the lower end of the county.

There are six ferries in this county, three on the San Joaquin, and three on King's river; they all do a fair business, from what I can learn.

Bees in this county do very well; on King's River, where they are mostly raised, they do as well, and perhaps better, than in any section of this State. Already they have cut at least one hundred bee trees, the bees having swarmed and went to the timber. Trees have been found that turned out over one hundred pounds of strained honey. The climate and range is well adapted for their culture.

Yours, respectfully,

THOMAS J. ALLEN,

Assessor of Fresno County.

HUMBOLDT COUNTY.

R. WILEY... County Assessor.

OFFICE COUNTY ASSESSOR, }
Eureka, November 18th, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In conformity to law, and in compliance with your circular of February twenty-eighth, I respectfully submit the following report of

the statistics for the present year for Humboldt County, and if they are not as full and complete as they should be, the fault may be attributed to the difficulties appertaining to the collecting of statistics in a country that is groaning under all the horrors incident to an Indian war.

Humboldt County is situated immediately on the coast, and embraces all the country between the fortieth and forty-first degrees of north latitude, and running back to the summit of the Coast Range, and embraces within its limits Cape Mendocino and Humboldt Bay. Said Bay extending inland from the entrance to the town of Arcata, (situated at the head of the Bay,) a distance of sixteen miles from the coast. The county seat is located at Eureka, situated on the south side of the Bay and about midway between Arcata and the entrance of the Bay.

The number of votes polled at last election was eight hundred and forty.

The number of persons assessed was eight hundred and twenty.

Humboldt County may be strictly called an agricultural county, from the fact that the Indians have driven the citizens entirely from the grazing portions of the county, and where last year twenty-six thousand head of cattle were feeding on the most luxurious grass the State affords, now scarce seventeen thousand can be found; showing a loss of over nine thousand head in one year, besides the increase.

The aggregate amount of grazing lands exceeds the amount of farming lands by two or three to one, but the total amount cannot be obtained, from the fact that the county lines have never been surveyed, nor has the larger portion of the county been surveyed by the United States.

There is a dense forest of redwood timber running through the county from north to south, and parallel with the coast, from ten to fifteen miles in width, outside, or east of which, is our grazing land, (Bald Hills), and all of which, from its alluvial soil, is susceptible of the highest state of cultivation.

Our farming land, however, at the present time is confined to the small valleys around the Bay and Eel River Valley, which is the finest body of farming land in the county.

The following table will show the amount of stock now in this county :

Description.	Number.
Horses, Spanish and American	2,035
Mules, (mostly Pack Mules)	593
Asses.....	8
Cows.....	5,456
Calves.....	7,188
Beef Cattle	3,730
Oxen.....	772
Sheep.....	584
Goats.....	41
Hogs.....	5,498
Chickens.....	5,161
Turkeys.....	178
Geese.....	83
Bee Hives.....	210
There is in this county, lands inclosed, acres.....	15,120
Lands under cultivation, acres.....	8,558

FARM PRODUCE

<i>Wheat.</i>	
Number of acres in Wheat.....	1,388
Number of bushels.....	31,653
<i>Barley.</i>	
Number of acres.....	65
Number of bushels.....	3,918
<i>Oats.</i>	
Number of acres.....	491
Number of bushels.....	23,490
<i>Corn.</i>	
Number of acres.....	56
Number of bushels.....	1,400
<i>Potatoes</i>	
Number of acres.....	457
Number of sacks.....	27,680
<i>Dairy Produce.</i>	
Butter, pounds.....	37,638
Cheese, pounds.....	12,162
<i>Eggs.</i>	
Number of dozen.....	6,860
<i>Fruit Trees, Etc.</i>	
Apple Trees.....	17,600
Peach Trees.....	9,968
Pear Trees.....	630
Plum Trees.....	975
Cherry Trees.....	417
Quince Trees.....	147
Apricot Trees.....	245
Gooseberry.....	8,630
Raspberry.....	6,300
Strawberry.....	11,800

There are four steam saw mills and two steam grist mills, also three water power saw mills and two grist mills. The steam mills are valued at fifty-one thousand dollars (\$51,000); the water power mills at fifteen thousand dollars (\$15,000.)

The saw mills have produced in the past year:

Lumber, feet	14,968,955
Lath	1,260,875

There is also one shingle machine which will produce five millions of shingles per annum.

The total amount of the assessment for Humboldt, for the present year, is as follows:

Description.	Value.
Real Estate	\$320,725
Improvements on same.....	291,705
Personal property.....	740,360
Total assessments.....	\$1,352,790

All of which is respectfully submitted.

R. WILEY,
Assessor of Humboldt County.

LAKE COUNTY.

E. L. MUSICK.....County Assessor.

OFFICE COUNTY ASSESSOR,
Lake Port, October 10th, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In compliance with your circular, and in conformity with the law, I herewith submit the following as my annual report:

Lake county was organized one year ago last June, with but a small population. It is situated in the Coast Range of mountains, west of Sacramento river, with a beautiful lake of fresh water in its centre, from which it takes its name.

It is principally a grazing county, although it contains some of the finest farming lands in the State; though the valleys are generally small, confined principally to the borders of the lake and along the streams running through the mountains, they are admirably adapted to the production of grain and fruits of almost every variety, and vegetables of every description, and in the greatest abundance.

Of timber, it is generally abundant, and in many localities inexhaustible. The varieties are sugar, pitch, and spruce pines; some cedar on the mountains. The valleys are generally covered with oak and ash; the former is the finest that grows in the State for the building of wagons and the making of staves.

Of the agricultural lands it is necessary to say but little. Practical experience has proven them capable of producing, in abundance, all the grains and fruits indigenous to almost every clime and zone. Wheat,

barley, oats, corn, buckwheat, beans, peas, potatoes, onions, melons, etc., yield up to the husbandman an abundant harvest, while the growing of tobacco is no longer an idle speculation, but a proven fact.

Of the Swamp and Overflowed Land of the county, I have but little knowledge. I will refer you to the County Surveyor's report.

Mineral lands, we have but little in the county. We have some flattering prospects of quicksilver in the southern portion of the county, which bids fair to become an item of interest.

In conclusion, I would urge the more definite location of the county lines between this county and Yolo and Colusa Counties, as there is much difficulty experienced by the officers in ascertaining the true limits of their respective counties, and a number of the settlers have had their property assessed in both counties this year.

Enclosed please find my statistical table.

All of which is respectfully submitted.

E. L. MUSICK,

Assessor of Lake County.

By J. B. ROBINSON, Deputy.

MARIPOSA COUNTY.

GEORGE W. CORNELL.....County Assessor.

OFFICE COUNTY ASSESSOR,

Coulterville, November 5th, 1861. }

Hon. J. F. HOUGHTON,

Surveyor-General:

SIR:—In accordance with the laws of this State, and in compliance with your request, I have the honor to submit my report for the current year. The Board of Supervisors of this county, sitting as a Board of Equalization, have this day completed their labors. You will find by reference to the accompanying schedule, an approximate estimate of all things pertaining to the resources of this county. It is almost impossible to furnish figures and facts in the premises, but by due and diligent inquiry, I think the return will approximate very near the truth.

You will observe a large increase in the assessed valuation of real and personal property. This fact is to be attributable to the energy of our Board of Supervisors, and to their impartial but inflexible execution of our revenue laws. This is a gratifying fact when it is remembered that our county has ever lain under an incubus of a heavy debt. There being under the present assessment, the supposed amount of nine thousand dollars increase income on property tax, and citizens of the county can now soon hope confidently of the extinguishment of our public debt.

Our county is emphatically a mining county. Its geographical situation is from the foot hills on the west, and extending to the summit of the Sierra Nevadas on the east, and bounded on the north by the first township line south of the Mount Diablo meridian. Throughout the extent of its length and breadth is found deposited the precious metals in greater or less quantities. Through the centre of our county runs the great back bone quartz lode, with its ramifications of metalliferous de-

posits. Heretofore, these deposits have been sought for the gold contained in them, but recent experiments and discoveries have demonstrated the fact that large deposits of the sulphates of copper exist, and that enterprise and capital are only needed to develop one of the many rich resources of the wealth of California. A company already organized are now at work opening the lode on the Merced river, about two miles above Flint & Peabody's mill. Scientific men express confidence in the richness of the deposit, and say that the indications rival the far famed Copperopolis country.

To the southeast of the town of Mariposa about eight miles, on the waters of the Chowchilla, recent discoveries have been made of rich deposits of silver ore. Assays have been made, and the results therefrom have been sufficient to induce parties to commence the developement of these mines. The stage of productiveness of these mines is yet incipient, therefore no absolute assurance can be given of their ultimate value.

The parties controlling the Las Mariposas estate in this county, have erected and now have several quartz mills running, in the aggregate, about one hundred and fifty stamps, sixty-four of which are driven by water power, and the remainder by steam. The gross product of these mills is variously estimated at from fifty to one hundred thousand dollars per month. The approximate amount will be near sixty thousand dollars per month.

We have no large bodies of agricultural land. Our arable soil is confined to small patches along the courses and deltas of our streams, and even but few of these are under cultivation, the adjoining Counties of Merced and Stanislaus furnishing us our supplies of cereals cheaper than we can grow them. Even our wants in vegetables are partially supplied from the Tuolumne and Merced country, at a point west of our county line. Nearly all grain grown in this county is found most profitable to cut green and make into hay. By this means a portion of our wants are supplied.

I respectfully refer you to the schedule for statistics concerning grapes.

You will observe that though our county is deficient in cereals and table vegetables, yet the grape flourishes largely in proportion to our population. This fact demonstrates the certainty that our mountain and hill sides are eminently adapted to the growth of the grape.

The vine will ultimately be a source of revenue and profit to producers.

Of timber, it is generally abundant in the mountainous districts of our county. From the western county line to Mariposa town the variety is small, and consists mainly of several species of oak, and inferior species of pine. To the eastward of the latter point the supply is inexhaustible, and consists of sugar, spruce, and pitch pines, of the finest and noblest qualities.

Lying about forty-five miles northeasterly of the town of Mariposa, is the valley and falls of the Yosemite. A description of this far famed natural curiosity would possibly be inappropriate in this report; but suffice it to say that it abounds in the wildest and sublimest scenery. A deep gorge in the mountains, it nestles far below the towering cliffs, and clothed in sylvan verdure; it receives at its eastern extremity, from a leap of four hundred feet, the waters of the Merced river, and bears them the distance of ten miles to its western extreme. From either side numerous little streams fall over the cliffs into the valley, seeking their level in the Merced river, forming many fantastic cascades, blending the sublime and beautiful in one view. A sight worth a visit.

We have no toll bridges—the floods of last winter carrying away all we then had, and they never have been rebuilt.

To our county town and vicinity good roads exist, and are kept in excellent order. Freight teams carry full loads to and fro all seasons of the year.

We have six School Districts, four of which now have teachers. No great attention has been given to public schools heretofore, our population being of a nomadic disposition. Attention is being paid; the subject and the School Fund increasing. We can soon hope to boast as good public schools as any in the mountains.

We have no manufactories in our county, unless three lager beer establishments can be dignified by that name. Whatever they are, they brew a sufficient amount of lager for the consumption of our citizens.

I am, Sir, very respectfully, your obedient servant,

GEORGE W. CORNELL,
Assessor of Mariposa County.

MENDOCINO COUNTY.

JOHN BURTONCounty Assessor.

OFFICE COUNTY ASSESSOR,
Ukiah City, Nov. 14th, 1862. } .

Hon. J. H. HOUGHTON,
Surveyor-General:

SIR:—Herewith enclosed I send you the County Assessor's report for Mendocino County.

We have in our county a large amount of redwood timber lands, which are not surveyed, and the most of it reported not worth surveying by the United States Surveyor; but if the same could be located under the School Land law, the principal part would be taken up, thereby creating quite a revenue to the State and county. But as all of our School Lands have been located in this district, there is no chance at present for parties to locate the same. If our delegation in Congress could have a bill passed allowing the School Lands of other land districts to be located in this one, it would cause a large amount of timber and grazing lands to be located in this county. Our timber lands extend from the Gualalla river to the Ten-Mile river, above the Mendocino Indian Reservation, a distance along the coast of seventy miles, and an average width of ten miles, with quite a number of large streams emptying into the ocean, which are all taken up, and mills are located at the mouths of the same; and there is not over ten thousand acres of land located on the above described tract, subject to taxation, when there should be not less than one hundred thousand acres taxed.

Yours respectfully,

JOHN BURTON,
Assessor of Mendocino County.

NEVADA COUNTY

G. B. McKee.....County Assessor

Office County Assessor, }
Nevada City. }Hon.*J. F. HOUGHTON,
Surveyor-General:

DEAR SIR:—In conformity with the statute and your letter of instruction, I submit the subjoined statement of the situation and resources of Nevada County.

Nevada county lies in about the thirty-ninth parallel of north latitude, extending from the State line, nearly due west, seventy miles, with an average width of about twenty miles, composing an area of about fourteen hundred square miles. Nearly the whole county is traversed by the ranges of the Sierra Nevada, its eastern boundary being the summit or divide of the Sierras, while its western limit is the foot-hills and the low lands of the main Yuba. The differences in altitude of this mountain range produces a corresponding variety of climate and production, and while in one portion of the county frost and snow are rarely or never seen, and tropical plants flourish in the open air, in another part frost is felt nearly every night in the year, and nothing but the hardier varieties of grasses can be grown.

AGRICULTURE.

The broken and uneven character of the county prevents this branch of industry attaining the extent and importance that characterises other portions of the State. The tillable lands are generally small valleys, of a few miles in extent, scattered through the hills; though small, they are very fertile, and produce vegetables and fruit of the finest quality in abundance. These command a higher price in our mountain markets than the larger and coarser products of the lower valleys. This, together with the nearness of their markets, cheap fencing, and exemption from destructive floods, has made the cultivation of these mountain farms more generally profitable to the farmers than the more extensive and more expensive farming of the Sacramento bottom. Along the summit of the Sierras are quite a number of extensive valleys that furnish pasturage for large herds of cattle from the month of June till about November. The cattle are driven to these valleys from the lower counties of this State. They thrive remarkably in the cool air and rich pastures of these natural meadows, and furnish with the best of beef the markets of our own mountain towns and of Nevada Territory.

FRUIT.

The culture of fruit is receiving increased attention, and though cherries and apricots do not thrive, and the peach crop is sometimes diminished by the late spring frosts, yet apples, pears, plums, and grapes, are grown with the greatest success. Experienced grape culturists are confident that the red soil of our mountains will produce a superior quality of wine grapes. From the number of choice vines now in cultivation through the county, this question cannot long remain in doubt.

MINING.

Mining is the principal and staple business of the county, and for the richness, regularity, and extent of the gold mines, Nevada County has been long celebrated. Hydraulic and quartz mines are principally worked, although river mining is still quite extensively prosecuted. Of the extent of the hydraulic mines it would be impossible to give any correct estimate; improvements in the modes of working, and the diminished cost of labor and water, are yearly opening new and extensive mining sections that were formerly abandoned as worthless; as to what new ranges the future may develop, I shall not attempt to predict, but I am confident that the present generation will have ample employment to work out the mines now opened.

QUARTZ MINING.

This great and permanent branch of mining industry is steadily advancing in importance. The great improvements in machinery, in the mode of working the leads, and especially in the management of the business, is working a most important and beneficial revolution in the whole system of quartz mining. The question is no longer with the quartz miner how he shall crush the most rock, but how he can work it most thoroughly; the sulphurets, formerly all wasted, are now saved, and frequently are the principal revenue from the mine. Two or three establishments in this county are employed exclusively in the chemical treatment of sulphurets. They purchase them from the quartz mills, and the business is made not only profitable to the purchaser, but very advantageous to the mill owner. The useless and extravagant expenditure of earlier days is also done away with, and while the miner makes sure that the gold is thoroughly extracted from the rock, he also sees that none of it is wasted in unnecessary expense. One very serious drawback exists, however, to quartz prospecting; it is the very great danger that some stale and antiquated claim may be trumped up to deprive the prospector of the fruits of his energy and enterprise. Most of the prominent ledges in the county have at some time been worked and virtually abandoned, yet, upon the strength of this work, the first holder, frequently after years of absence, returns to harass the successful proprietor, either seeking to deprive him of his mine, or to levy black mail upon him for its quiet possession.

There is no legal rule by which the lapse of time necessary to constitute an abandonment is established, and the ownership of a vast number of quartz leads is therefore a matter of utter uncertainty. If some legislation could be had upon this subject, and the fact that a quartz lead was not worked for a period of one or two years, was made *conclusive* evidence of abandonment, it would give a great impetus to quartz mining, not only in this county, but throughout the entire quartz region.

The floods of last winter injured some of the older and deeper mines, filling them with water, and causing slides; they are, however, being repaired and re-opened. New leads are being daily struck, and at no period has this branch of mining appeared as active and promising as at the present.

WATER DITCHES.

In these we are highly favored. The regularity of the ridges has greatly facilitated the construction of ditches. While the numerous

streams have afforded an abundant supply of water, several of the larger ditches have their sources of supply in the lakes about the summit, and furnish water through the whole year. This water is again taken from the streams by the lower ditches, and the whole county is thus furnished with a regular and almost continuous supply of water. The effect of this, not only upon the business of mining, but upon the habits and character of the miners themselves, is marked. The magnitude and importance of the ditch interests confer a corresponding stability to the mining interests upon which they are dependent. The improvements made are of a more durable and substantial character. Continuous and regular employment induces regular and settled habits, and the miner, looking upon his employment as a regular and established business, and not a short-lived speculation, provides himself with the comforts and conveniences of a home. That these beneficial influences produce the most decided effect upon both the moral and social character of the miners themselves, need hardly be stated.

SAW MILLS.

The middle and eastern portions of the county are heavily timbered with pine, cedar, spruce, hemlock, and oak; in the western portion pine is scarcer, and oak takes its place. A large amount of lumber is used in the mines, and a still larger amount is sent to the valleys in the shape of fencing. Large amounts of lumber are yearly transported to Nevada Territory, and this must increase as the resources of that country are developed.

TOLL ROADS.

The principal thoroughfares through the county are toll roads. Experience seems to establish the fact, that if we would have good roads in the mountains we must look to private enterprise, rather than public spirit, to construct and manage them. Nothing less than the interest men feel in their own personal investments will induce them to do anything for a public highway. That interest is, however, enlisted by the establishment of toll roads, and probably the result is fully as beneficial to the community as though the county had undertaken their construction and management.

GRIST MILLS.

But little grain is grown in the county, and we have but one heavy flouring establishment. This is at Nevada City, and is capable of turning out one hundred barrels of flour per day, for which it finds a steady demand, both in this county and in Washoe. The mill is supplied with grain from Bear river, in Placer County, and from Yuba County.

FINANCIAL SITUATION.

Like most of the other counties of this State, Nevada County suffered severely from the extravagance and mismanagement of earlier days. In addition to this, the county buildings and records were destroyed by fire in eighteen hundred and fifty-six. From these causes a very heavy debt was entailed upon the county. Under the present system of assessing and collecting, with economy in the county government, this debt is being rapidly removed, and in two years, at the farthest, will be entirely

paid off. When this shall be accomplished, Nevada County, with her splendid mineral resources, will be the first, as she is now among the foremost counties in the State.

For the statistics upon which the foregoing statement is based, please see the tabular report accompanying this.

All of which is most respectfully submitted:

GEORGE B. McKEE,
Assessor of Nevada County.

PLACER COUNTY.

LETTER FROM THE CLERK OF THE BOARD OF SUPERVISORS.

AUBURN, December 10th, 1862.

Hon J. F. HOUGHTON,
Surveyor-General:

SIR:—I have labored earnestly in an effort to compile the returns of the District Assessors of Placer County, and find it utterly impossible to arrive at any conclusion which would be at all reliable; in fact, I find many statements of whose incorrectness I am positively informed, and am quite as positive that the best compilation in my power to make, would be better calculated to mislead than to convey useful information. Permit me to suggest that in future you communicate directly with the Boards of Supervisors, urging them to withhold any allowance to the Assessors for their services until they have made such a report as the law contemplates.

Very respectfully, etc.,

W. A. SELKIRK,
Ex-Recorder, and Clerk Board of Supervisors, Placer County

PLUMAS COUNTY.

WILLIAM W. KELLOGG.....County Assessor

OFFICE COUNTY ASSESSOR,
Quincy, November 18th, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In conformity with the law, I herewith transmit the statistics of Plumas County, so far as I have been able to collect them, though I find it almost impossible to give them all correctly.

The mining and agricultural interests of this county are nearly equal. Most of the mining districts have been worked since eighteen hundred and fifty-one, and still the county is hardly prospected. A large number of rich and extensive quartz leads have been discovered the past season, and a number of mills are being built. At Round Valley alone, no less than twelve new mills are in process of construction. The Eureka Dis-

trict is one of the richest in the State. Several silver and copper leads have been found, and companies organized to prospect and work them. The placer and river mines are generally paying well. The hill diggings are very extensive, and a large amount of capital and labor is being expended upon them.

The agricultural district comprises American, Indian, Sierra, Humbug, Genessee, Honey Lake, Mohawk, and Long Valleys, and Big Meadows. Wheat, barley, oats, hay, and potatoes, are the staple products, and, after supplying our own market, a large surplus is shipped to the Washoe and Humboldt mines. An immense quantity of hay is cut in Mohawk and Sierra Valleys; the market is at Virginia City.

Great improvements are being made in roads throughout the county. A large share of the Humboldt and Washoe travel passes through Honey Lake and Beckworth's Pass.

Many of our citizens are planting orchards, and I doubt not that within two years enough fruit will be grown to furnish the county, without "hauling" from the lower valleys.

The damage done by the flood of last spring was great, but is mostly replaced, and much more substantial than before.

The assessed value of property is nearly three hundred thousand dollars (\$300,000) more than in eighteen hundred and sixty-one.

And, in conclusion, allow me to call your attention to the fact, that hardly a mile of our county boundary has been run or satisfactorily settled, and great inconvenience and much trouble is occasioned thereby. The line between Nevada and California has never been officially established, and Honey Lake and Long Valley claim at times (say "tax times,") to be in Nevada, and with Nevada claim to be in California.

The line between Sierra and this county has occasional much trouble and *costs* to the citizens of Sierra Valley, it having been assessed by Assessors of both counties, and some are paying taxes to one county, and some to the other, both claiming jurisdiction over the valley.

Hoping to be able by another year to furnish you a more minute table of statistics, I subscribe myself,

Yours respectfully,

WM. W. KELLOG,
Assessor Plumas County.

SAN JOAQUIN COUNTY.

J. M. LONG.....County Assessor.

OFFICE COUNTY ASSESSOR, }
Stockton, November 12, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General :

SIR:—In compliance with your circular and in conformity with law, I respectfully submit to you the following as my annual report :

The County of San Joaquin embraces one of the best agricultural districts of the State, and is admirably adapted from its location for those

facilities of commerce which are needed for bringing the productions of the soil to their proper market.

The City of Stockton, which is the chief commercial depot of the county, is situate on a slough connected with San Joaquin river, and daily navigation to and from San Francisco is open at all times.

TERMS OF COURTS.

District Court—Hon. C. M. Creanor, Judge; H. E. Hall, Clerk. Regular terms on the first Mondays of January, April, August, and December.

Court of Sessions—Hon. G. W. Tyler, Judge; B. G. Weir and R. K. Nobles, Associates; H. E. Hall, Clerk. Regular terms on first Monday in February, second Monday in May, and first Monday in October.

County Court—Hon. G. W. Tyler, Judge; H. E. Hall, Clerk. Regular terms on first Mondays of January, March, May, July, September, and November.

Probate Court—Hon. G. W. Tyler, Judge; H. E. Hall, Clerk. Regular terms on the fourth Monday of each month.

Board of Supervisors—Consists of M. Severy, John Twoky, and John Sandford. Regular terms on the first Mondays of February, May, August, and November.

COUNTY OFFICERS.

County Judge.....	G. W. Tyler.
Sheriff.....	T. R. Hook.
Clerk.....	H. E. Hall.
Recorder.....	R. E. Wilhoit.
Treasurer	Dr. J. M. Kelsey.
District Attorney	H. B. Underhill.
County Surveyor.....	G. E. Drew.
Assessor	J. M. Long.
Superintendent Public Instruction	C. Collins.
Public Administrator	A. Blake.
Coroner	M. H. Bond.

AGRICULTURE.

The natural advantages of this county in regard to its agriculture are great, but its practice, in my opinion, is not yet commensurate with what may be expected from the quality of the soil. In the vicinity of Stockton the soil is a fertile alluvium, generally rich in vegetable matter, and containing a liberal proportion of alkalies. In general, the excess of alkaline matter is deposited in combination with a portion of the siliceous and argillaceous matters of the alluvium in a hard pan, several feet below the surface, thus forming an inexhaustible supply of those matters which in most soils get worn out by cultivation, at all times within the reach of husbandmen, if necessary. In some few cases the vegetable mould is so thin as to give to the soil, in consequence of its substratum, the character of alkaline, but there is not much of this soil in the county, and it is to be presumed that by means of deep cultivation, and taking due care in draining off winter rains, which might otherwise stand upon it in pools, the evil might easily be overcome. On the Mokulumne, and in the vicinity of French Camp, the land varies somewhat from that found in the vicinity of Stockton, and on the Calaveras, a sandy loam being more gen-

erally prevalent. This soil is by no means a barren sand, as is found in the neighborhood of San Francisco, and in some other portions of the State. It contains much vegetable matter, and from its lying at a low elevation above the adjoining rivers or sloughs, is sufficiently supplied with moisture to grow the usual agricultural productions of the State in abundance. Should the cultivation of the sorghum or Chinese sugar cane, as it has been called, be undertaken in this county, there are, perhaps, no other soils on which it is likely to be successful. The soils around Stockton, and on the Calaveras, from their more tenacious character, and from their being rich in all the constituents of wheat, are especially adapted for the cultivation of that grain, and probably as fine samples are grown upon them as any other portion of the State, but it is doubtful whether the general mode of cultivation might not be improved. These lands are generally too flat and liable to be too wet in winter; as yet the plowing is frequently performed in rather a primitive manner, more regard being paid to having it done with as much expedition as possible, than to doing it in the best possible way; the advantage of less cost and labor in putting in the crop is thus overbalanced, in many cases, by the loss sustained from not making proper outlets for the water, or rains, or overflows, which loss might be prevented if the land were plowed in regular ridges with water furrows between. As I stated before, the natural advantages of the county are great, but the general farm management evidently admits of improvements. Both in town and country, the owners of real estate, in many cases, seem to have a disposition to wait, in the expectation that the value of their property will advance by and by, from the general advance of land, without the necessity of their being at much outlay for its improvement. We consequently find instances of farms of from one hundred and sixty to four hundred acres, and upwards, with one or two men at work upon them getting in as much grain as possible in any shape, and leaving the balance in its natural condition. A more perfect mode of cultivation of a less quantity of land would, in my opinion, be productive of better results, especially as this fine agricultural district might evidently maintain three times its present inhabitants in greater comfort than that of the present cultivators, and with at least proportionate profits.

FRUIT TREES AND VINES.

Around the City of Stockton, and on the various farms of the county, the cultivators of orchards and vineyards have made considerable progress. The land is admirably adapted for the purpose, as the fine specimens of fruits and grapes exhibited at our District Fairs testify. The cultivation of these orchards and vineyards also admits of much improvement; they are frequently so much incumbered with weeds as not to give the fruits a fair chance to reach the perfection which our soils and climate justify us in expecting, and which we find they are capable of producing when the soil is properly cultivated; hence we frequently hear outcries of the crops having been destroyed by insects, which have found a suitable place of deposit for their eggs among the weeds, or from diseases in the trees resulting from over wetness of the soil in winter, or imperfect cultivation.

LIVE STOCK.

The live stock of this county has very much improved within the last few years, in consequence, no doubt, of the impetus given to this branch

of husbandry by our District Fairs. We have some of the best Durhams and Devons in the State, and the propriety of breeding from them is now universally admitted; the consequence is, that crosses between them and the stock formerly in the county form almost exclusively the cattle stock of the county. The horses, hogs, sheep, and poultry have greatly improved by the same causes, and no one can say as regards its live stock, our county does not maintain a prominent position among the several counties of the State.

COMPILED STATISTICS.

The accompanying schedule shows the various agricultural products of the county; also its fruit trees and vines, live stock, etc., on examining which, it will be seen there is a considerable falling off in some instances from last year's report. There is little doubt that in consequence of the floods of last winter, much loss was sustained, and the statistics of produce are necessarily less. It is to be presumed that next year will exhibit the county in a condition superior to that of any one previous.

Hoping the report will meet with your approbation,

I remain your obedient servant,

J. M. LONG,
Assessor of San Joaquin County.

SAN LUIS OBISPO COUNTY.

VALENTIN GAJIOLA.....County Assessor.

OFFICE COUNTY ASSESSOR,
San Luis Obispo, Nov., 1862. }

Hon J. F. HOUGHTON,
Surveyor-General:

DEAR SIR :—In conformity with law, I have the honor to transmit the following, my annual report as Assessor of San Luis Obispo County :

FRUIT CULTURE.

The fruit culture is on the increase, but the value of all kinds is much less than in former years. The grape culture is improving yearly.

LIVE STOCK.

All kinds of live stock have depreciated in value about one half; yet many of the stock raisers, having seen the necessity of improving the quality of their stock, have introduced fine blood American stallions, bulls, and rams.

LANDS.

Land has depreciated in value one half from last year. This county being a stock-raising county, not much attention is paid to agriculture,

anything more than for domestic use; being so remote from market, it would not pay the farmer to send it to the city.

The importance of establishing more clearly the boundary line between this county and Monterey is very urgent. Owing to the difficulty of making the necessary assessment, very many persons in the vicinity of this line are not assessed at all, or state they have been assessed in Monterey County when the San Luis Obispo Assessor arrives to take the assessment, and they state the same to the Monterey Assessor; therefore, they are not assessed at all. I would recommend to have this line run before the time arrives to take the assessment for the year eighteen hundred and sixty-three.

VALUATION OF PROPERTY.

Comparing the value of property of the year eighteen hundred and sixty-one to the assessment of eighteen hundred and sixty-two, you will perceive there has been a great decrease in the valuation of all kinds of property:

<i>Valuation of Property for the Year 1861.</i>		
Real Estate.....	\$366,572 13	
Personal Property.....	438,433 00	
		\$805,005 13

<i>Valuation of Property for the Year 1862.</i>		
Real Estate.....	\$234,721 50	
Personal Property.....	278,021 06	
		\$512,742 56

TAXES FOR THE YEAR 1862.

Federal Tax on each \$100.....	\$	15
State Tax on each \$100.....		62
<i>County :</i>		
General Fund, on each \$100.....		65
Sinking Fund on each \$100.....		1 00
Court House and Jail Fund on each \$100		50
Road Fund on each \$100....		25
School Fund on each \$100.....		25
Total Tax on each \$100.....	\$3	42

All of which is respectfully submitted.

VALENTIN GAJIOLA,

Assessor of San Luis Obispo County.

By BENJAMIN F. Hook, Deputy.

SAN MATEO COUNTY.

S. H. SNYDERCounty Assessor.

OFFICE COUNTY ASSESSOR,
Redwood City, Nov. 1st, 1862. }Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—I respectfully deliver you the report of the statistics of San Mateo County, which is as full and correct as I have been able to ascertain by diligent investigation of its productions and resources. This county is not chiefly an agricultural county. A great portion of its inhabitants are engaged in the manufacture of lumber, shingles, and cord wood. The principal productions of the county are wheat, barley, oats, and potatoes, of which the yield this year is about an average crop.

FRUIT.

There are but very few of the farmers that have raised any, as the orchards and trees are too young to bear. It is thought that certain portions of the county will be good fruit-growing soil.

In the way of improvements, we have twenty-two miles of railroad in progress, which will be completed the coming year.

The principal timber is oak and redwood, which is fast diminishing.

The number of acres of Swamp and Overflowed Land is supposed to be ten thousand.

Yours, &c.,

S. H. SNYDER,
Assessor of San Mateo County.

SANTA CRUZ COUNTY.

NELSON TAYLOR.....County Assessor.

OFFICE COUNTY ASSESSOR,
Santa Cruz, Nov. 11th, 1862. }Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In conformity to law and in compliance with your circular, I herewith send the statistics of this county, as collected during the summer. Although not as full as could be desired, still it approximates somewhat near to facts—a great part of it being guess work.

Santa Cruz represents a variety of interests—agriculture, grazing, lumbering tanning, paper making, lime, etc.—being well adapted to all of these interests. The blanks not calling for leather, lime, etc., I will here state there is five tanneries in this county. The statistics of three show the value of leather manufactured, seventy-five thousand dollars (\$75,000.) One was entirely swept off last winter, the value of which was not obtained. The floods of last winter were very severe, sweeping off several saw mills and materially injuring others. Three

steam saw mills are being built this summer. There are four lime kilns, two of which made sixty-five thousand barrels of lime the last year. There are other interests being prosecuted, and others in prospect, that will enhance the value of the productions of our county.

All of which is respectfully submitted.

Yours, &c.,

NELSON TAYLOR,
Assessor of Santa Cruz County.

SIERRA COUNTY.

A. MARMON.....County Assessor.

OFFICE COUNTY ASSESSOR,
Downieville, Dec. 4th, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In compliance with law I have the honor to submit to you my annual report for the year eighteen hundred and sixty-two, as County Assessor of Sierra County. I find it almost impossible to comply strictly with the requirements of the law, but have done so to the best of my knowledge.

This county is a mining county, or principally so, and its population rather migratory for the steady advance of its resources. Notwithstanding the great floods of last December and January, which swept away many thousand dollars' worth of property in buildings, bridges, flumes, ditches, and numerous other improvements, there has been a steady development of the mineral resources, as well as permanence and interest attached to agricultural pursuits, which seems to overbalance the destruction caused by the floods, as the assessment roll of eighteen hundred and sixty-one and eighteen hundred and sixty-two will show. The latter year shows a gain over the former of eighty-three thousand and eight dollars and twenty-nine cents, (\$83,008 29,) and as the energy of our people is somewhat aroused in the more permanent advancement of the county's interests, good roads and trails are being built to all places of importance. And during the past summer two permanent bridges have been built: one across the Main Yuba at Downieville, and one across the North Fork of the North Yuba; and many other improvements which show progress. We feel assured, as we are gradually liquidating our county debt, that old Sierra is building from the bed rock.

QUARTZ MILLS.

In the way of quartz mills, we have eight in successful operation; assessed value, one hundred and ten thousand dollars, (\$110,000), crushing about twenty-eight thousand tons of rock annually, and extracting therefrom four hundred and fifty-one thousand dollars, (\$451,000.) But such sums have not been the happy results to all that have been engaged in this branch of mining. A number of quartz mills are now standing idle in the county, but many of them will be brought into operation when they come into the hands of men that have means, and will be made to yield a competence to the owners thereof.

SAW MILLS.

Saw mills, steam and water-power, are sixteen in number, valued at forty thousand two hundred dollars, (\$40,200), cutting, in the aggregate, about six million four hundred and ten thousand feet of lumber annually. The value of lumber on hand at these different mills is about one hundred and seven thousand five hundred and seventy dollars, (\$107,570,) with an abundance of timber to amply supply them for a number of years. The timber is generally of the pine species, such as sugar, spruce, and pitch pine, with an occasional oak, cedar, etc.

MINING DITCHES.

The total number of mining ditches is forty-five; valued at two hundred and seventy-three thousand nine hundred dollars, (\$273,900,) and about one hundred and forty-three miles in length, with a capacity of twenty-six thousand inches.

TURNPIKE ROADS.

There are three turnpike roads in the county, valued at thirty-one thousand dollars, (\$31,000,) fifty-eight miles in length, with a fair prospect of the Yuba Gap Road being completed through our county by June next.

FRUIT TREES.

Description.	Number.
Apple	1,625
Pear.....	406
Peach	2,400
Cherry	77
Quince.....	1,625
Almond.....	12
Plum.....	40
Nectarine	28
Apricot.....	72
Grape Vines.....	5,374

LIVE STOCK.

Description.	Number.
Horses	51
Mules.....	175
Cows.....	99
Calves.....	4
Beef Cattle.....	105
Sheep.....	16
Goats.....	9
Hogs.....	134

I would here add that the principal part of the live stock which is owned in this county was kept in Yuba County about seven months in the year, and is generally assessed in that county before the owners in this county bring them away, hence you see the poor showing in the way of live stock.

LAND.

We have about three hundred acres enclosed, and about one hundred and fifty acres under cultivation. All the cultivated land is in small parcels, where water can be had for irrigation. The lands have proved remunerative to the laborer.

All of which is respectfully submitted.

A. MARMON,
Assessor of Sierra County.

SISKIYOU COUNTY.

THOMAS O. ROURKE.....County Assessor.

OFFICE COUNTY ASSESSOR,
Yreka, Nov. 12th, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—Agreeably to your request, and in compliance with the law, I beg leave to submit the following report for the year eighteen hundred and sixty-two:

REAL ESTATE.

Value of real estate and improvements.....	\$553,000	
Value of personal property	1,100,000	
Total value		\$1,653,000

LAND, RANCHES, ETC.

There are about fifty-three thousand acres of land under improvement, and the most of it enclosed with substantial fence. There are two hundred and ninety ranches, averaging a little over a quarter section to the ranch. There is very little, if any, land that would properly come under the head of Swamp and Overflowed Land.

TIMBER.

There is an inexhaustible quantity, and of every variety known to the mountains of California.

AGRICULTURAL STATISTICS.

Description.	Acres.	Bushels.
Wheat.....	3,900	175,000
Oats.....	2,180	63,000
Barley.....	1,800	54,000
Rye.....	40	1,000
Corn.....	150	6,000
Buckwheat.....	10	300
Peas.....	40	1,200
Beans.....	100	3,000
Potatoes.....	400	24,000
Alfalfa.....	250	.....
Hay.....	5,300	.....
Vegetables... ..	510	.....

Description.	Number.
Apple Trees.....	3,710
Peach Trees.....	1,805
Plum Trees.....	884
Cherry Trees.....	450
Nectarine Trees.....	83
Apricot Trees.....	42
Quince Trees.....	15
Grape Vines.....	4,100
Strawberry Vines.....	5,210
Raspberry Bushes.....	915
Gooseberry Bushes.....	450
Blackberry Bushes.....	913

Live Stock, Etc.	Number.
American Horses.....	927
Spanish and Indian Horses.....	1,548
Total number of Horses.....	2,475
Mules.....	715
Jacks.....	13
Jennets.....	10
Cows.....	2,830
Calves.....	1,810
Oxen.....	600
Stock Cattle.....	8,415
Sheep.....	1,913
Hogs.....	3,116

Live Stock, Etc.	Number.
Hens	23,010
Ducks	751
Geese	249
Turkeys	563

Stock Slaughtered.	Number.	Value.
Cattle	3,000	\$45,000
Sheep	1,000	2,400
Hogs	2,500	20,000
Calves	300	1,500
Total	6,800	\$68,900

There are eighty-five stands of Bees in the county, worth in the aggregate one thousand five hundred and fifty dollars (\$1,550.)

TOLL BRIDGES AND FERRIES.

Description.	Number.	Value.
Toll Bridge	1	\$1,500
Ferries	4	12,000
Total value	5	\$13,500

DITCHES AND CANALS.

Description.	Miles.	Value.
Shasta River Canal Company	80	\$10,500
Scott River Water and Mining Company	10	4,000
Cottonwood Mill and Mining Company	8	3,000
Altona Ditch Company	12	3,000
Oro Fino Ditch Company	13	4,000
Cottonwood and Rancheria Ditch	10	1,500
Greenhorn Ditch	5	1,000
Hawkinsville Ditch	5	800
Lower Cottonwood Ditch	4	500
Newell's Ditch	4	300
Siad Water Ditch	7	500
Evans' Ditch	3	400

Description.	Miles.	Value.
Mill Creek Ditch	4	400
Whiting's Ditch.....	5	700
Totals.....	170	\$30,600

QUARTZ MILLS, ETC.

There are six quartz mills in the county, and one only in operation at present. Our quartz leads have not been very remunerative, while our placer mines are not surpassed by the mines of any county in the State. There is one arastra in operation, making fair wages for its owners.

SAW MILLS.

There are fifteen saw mills in the county, worth in the aggregate, twenty-five thousand five hundred dollars, (\$25,500); they saw about twenty-five hundred thousand feet of lumber annually.

GRIST MILLS.

There are six grist mills in the county—four water, and two steam power—valued at twenty-one thousand five hundred dollars, (\$21,500.)

MISCELLANEOUS.

We have one iron foundry, which supplies all but the heavy castings for this county and southern Oregon. We have two salt springs just opened, yielding at present one hundred and fifty pounds per day. We have four breweries, two tanneries, and one gas factory.

CONCLUSION.

Siskiyou County has suffered from the floods full as much as any mountain county in the State, while her loss in population, owing to our proximity to the northern mines, has been far greater; full fifteen hundred have left this county the past year, taking property to the amount of three hundred thousand dollars, while our loss by flood, and the general depreciation of property, will reach two hundred and forty thousand more—making a total loss in property the past year of five hundred and forty-thousand dollars.

Respectfully submitted.

THOMAS O. ROURKE,
County Assessor.

SOLANO COUNTY.

CYRUS AYER.....County Assessor.

OFFICE COUNTY ASSESSOR,
Fairfield, Nov. 10th, 1862. }Hon. J. F. HOUGHTON,
Surveyor-General :

DEAR SIR:—Permit me to congratulate you on the honorable position you hold in a State that is the richest in the world. Richest in everything that goes to make a State great and its people happy. A State that has sprung from chaos (if you will allow me the expression) to be a monarch, in the short space of thirteen years. Then Cotton was called King. If it was King, it was of limited power, and had to submit to a mightier power, to the monarch of California, called Gold, whose power will be as unlimited in comparison to its present power, as are its resources now greater than they were thirteen years since. California is not confined to gold as a mineral, but she possesses all the various minerals necessary to make a nation great and happy.

But, Sir, great as are the mineral resources of California, they are as a drop compared to the ocean, as a grain of sand to the mountain, when compared to her agricultural department.

But pardon my digression, for on reflection you did not ask me for a dissertation on California in general, but for statistics of Solano county in particular. A very small part of the great State, in point of size, but as worthy of the name of California as any child was every worthy of the name of its noble sire.

Solano boasts not of mineral resources, but of agricultural and commercial advantages. If surpassed at all, it is only by a few of the many rich and prosperous counties of the State.

Solano is watered partly on the west by San Pablo Bay, and on the south by Suisun Bay and Sacramento river, making a navigable front of about eighty miles, besides many sloughs running into the country fifteen or twenty miles, which are navigable for steamboats and other vessels, of two hundred and fifty tons burden, enabling the farmer to get his produce to market at a trifling expense, besides causing many smart and thriving villages to spring up in every section of the county—villages producing institutions of learning that any old settled country might feel proud of.

Among the most thriving villages in the county are Vallejo, Benicia, Suisun, and Vacaville.

Vallejo is on the west of the county, and is a smart and thriving place, supported by as good an agricultural district as could be wished, and by the Government Works and Navy Yard, on Mare Island. Population, about one thousand five hundred.

Benicia, seven miles southeast of Vallejo, has a larger population, and is likewise in a thriving condition, and supporting no less than three private schools which would be a credit to any New England village. One of the schools is under the supervision and instruction of Miss Atkins—popularly known as the Benicia Female Seminary. It is one of the most popular and flourishing institutions of the kind in the State. The present number of pupils is about one hundred and twenty.

The Saint Catharine's Academy, a Catholic Institute, under the direc-

tion of Sister Mary Goemare, is in a prosperous condition, the pupils now in attendance numbering over one hundred and forty.

The Benicia Collegiate Institute, under the charge of C. J. Flatt, is for males only; the present number of pupils being about seventy-five.

The Pacific Mail Steamship Company's works are located here, where all repairs, etc., are made on the ocean steamers, employing a great number of the best workmen, mechanics, and engineers.

The United States Arsenal is also located at Benicia, and the soldiers and Government officers help to give life to the business of the town.

Suisun is in the Township of Suisun, so is Fairfield, both being almost the same as one village. They are at the head of navigation of Suisun slough, a branch of Suisun Bay, extending inland about twenty miles, and is navigable for vessels of one hundred tons burden. Commercially speaking, Suisun is one of the best locations in the county for business purposes. As an evidence of its prosperity, I will say it contains more substantial brick buildings than all the rest of the county besides, unless Government buildings. Amongst the best of these is the steam flouring mill of Marston & Stackman, that is kept running night and day, like its owners, who never sleep, but always buy the best wheat and make the best flour, it is said, in the State.

There are also a number of brick stores and shops in this place. The county buildings are also built of brick, and are said to be the finest in the State, and what is better, they are paid for.

As an evidence of the thrift of this village, I will say it has six sail vessels and one steamboat running to and from this place constantly.

Suisun has a back country of the richest fruit, vegetable, and grain lands, in the State, and is destined to be one of the most substantial villages in the county.

The next village is Vacaville, about eight miles from Suisun, inland. It is surrounded by a rich agricultural region, and being pleasantly situated in a healthy and beautiful valley of the Coast Range, it has been selected as the proper location for a College, which was established in eighteen hundred and sixty, and chartered in eighteen hundred and sixty-one. It has two large and well constructed brick buildings, and ten acres of land. There are five teachers and one hundred and sixteen pupils—seventy-five males, and forty-one females. The last examination satisfied all present that the association of the sexes in the same class contributed to the success of both, besides securing much better discipline. The course of study is extensive, embracing the "ornamental" as well as "useful" branches of liberal education. This institution is known as the Pacific Methodist College at Vacaville, and at present it is under the charge of Reverend W. T. Lucky, whom to know is a sufficient guaranty of its success. The appearances are that it is destined to be one of the most popular institutions of the kind in the State. It has an endowment fund of twenty thousand dollars, (\$20,000,) the interest of which, together with a small tuition fee, are sufficient to defray all expenses.

There are other small villages and shipping points well worthy of note, as they will soon be places of much importance, being so naturally located commercially that they will soon rival some of the older villages.

In point of soil, I think this county is not excelled by any in the State. Such a variety of soil, with its fertility, can hardly be found in California besides. The cereals are produced in as great abundance per acre as anywhere in the State. The average yield of wheat is about thirty-five

bushels per acre, although there are some fields which produce over sixty per acre.

Barley is not so extensively sown, but it is raised with but little labor, producing about forty bushels per acre on an average, many fields producing twice that. Corn is not much grown, except for green corn. Irish and sweet potatoes are grown in the greatest perfection and abundance. All the various vegetables that I ever saw in my life are produced in Solano County with the greatest ease and abundance imaginable.

As to the various kinds of fruit, I will say that I think we can beat any part of California. I believe there is no place in the State where fruit and vegetables can be produced earlier than in some of the valleys of this county. I tried to obtain the amount of fruit and vegetables shipped from here annually, but could not get a very correct account; but it is not far from three hundred thousand dollars (\$300,000) per annum. All kinds of fruit grow in the greatest perfection. Figs produce two crops per year.

Wine making is beginning to attract attention, and soon the county will produce wine for export, and what is singular, it is said that the wine made here is better than that made in any other place in the State. I do not know whether the excellence exists in the soil or in the manufacture.

About one fourth of the land of this county is hill land, lying in the northwest part of the county, containing the principal timber district, which consists of oak, and is of no account only for fire wood. About one half is valley land, lying between the hills and the sloughs, which is the principal grain land, although some of the rolling lands, and even hill lands, produce excellent crops of grain.

The people are generally turning their attention to agricultural and horticultural pursuits, believing it the surest road to wealth and happiness.

There is plenty of Government land yet that will make splendid farms. The plains have been thought to be of little value in years gone by, but they are now taken up, fenced, and nice houses and outbuildings put on them, with as nice gardens and front yards, filled with ornamental trees and shrubs, with vines and flowers of every variety.

Crops of grain have been raised on these lands that really astonished those who made the experiment.

I say we have no poor land in Solano County, and I think time and experiment will prove the assertion. The last one fourth is the tule land, which is the part bordering on the river and Bay, (and was thought to be a useless waste of God Almighty in making it,) has been taken up and cultivated with success—and it is found to be the best land on the globe, and has fully demonstrated that the Creator understood his business.

The cry was this spring that "tule land is a failure," and many abandoned their claims on account of the floods of last winter, very unceremoniously, protesting against all tule lands, and declaring an eternal evacuation for all time to come. The calm and thoughtful, who always succeed in life, have remained in the enjoyment of their lands, and find what many call ruin and destruction was only one of the greatest blessings that Heaven could bestow, by raising the whole surface from one inch to six feet, making in some cases from fifty to sixty acres of dry land where there was nothing but tule; and on other ranches, filling

up holes of from one to ten acres in the centre of a man's farm. If these new-made lands are not a blessing, what would be? Yes, Sir, they are a blessing; and I say the county is worth more to-day than it was before the flood, although some men were ruined by it. Yet, let me say, there are some of the prettiest farms in the tule that can be found in California, and no better land can be found anywhere.

If a canal was cut from Knight's Landing, in Yolo County, to Nurse's Landing, in Solano County, (which is eight miles from Suisun City,) it would forever prevent such an overflow as was experienced last winter. I believe it is the opinion of most tule men that it is the only thing that will be of much value to the tule. So let me say, if the State would take hold of the project, and work its criminals to dig such a canal, it would not only reclaim the tule lands of Solano, but also of Yolo, and Sacramento County and City would be greatly relieved from so great a surplus of water as they had last winter. You may think that I am chimerical, but let me say that whenever there is a Legislature that cares one groat about doing any thing for the benefit of the State at large and the tule bordering on the Sacramento River, *that* is what will be done. If the Legislature could but see what the tule is capable of doing for the country, and what it has already done, they would do something besides squander the funds of the State.

Allow me to say a few words in respect to roads, although it is not much to the credit of the county to say much about them. Suffice it to say that when the present able Board of Supervisors commenced their term of office, there was scarcely such a thing as a regularly laid out road in the county. They have taken the responsibility like men, and laid out roads and built bridges all through the county, much to the convenience of man and also of horses. I think if they could retain their offices a few years more, our roads would be a credit to the county, and our present indebtedness much less than at present.

Government lands are fast being taken up by substantial settlers, who are fencing and improving the country, and it really makes one feel proud to think that he lives in a land of such prosperity.

Fine horses and fine implements of husbandry are the order of the day. The stock of horses, cattle, and sheep, are not behind in the progress of improvement. To look at the fine imported stock, shows that we are not behind the other counties of the State in that respect. As an evidence of what I say, I would refer you to the list of premiums awarded to the citizens of Solano County. You may look at all the industrial interests of the county, and prosperity is the order of the day. It is to be seen at every turn of the eye.

We have two newspapers, which are published at Suisun City. They are well supported, and will compare favorably with any in the State so far as ability to edit the same is concerned.

In assessing the property on the Solano and Napa line, I found that the people were unable to tell whether they lived in Solano or Napa. Now, Sir, I am told that the Napa folks have had different surveys, and every time they make a new survey, they take a slice from Solano. I do not know the truth about it, but for fear they might look upon Vallejo, Benicia, and perhaps on Suisun, with their filibustering eyes, and some time find a pliant Legislature to second their rapacity, I would advise and recommend, for the good and safety of Solano County, (if it is desirable to have any county by that name,) to drive them back a few miles, where they belong, and have the boundary defined, that a stop be put to such filibustering, and enable the Assessor to find where his county lines are.

You will see by the statistics I send you that our assessment is much larger than last year. Now, since our county lost by the flood of last winter to the extent of one half of our stock, and as the tract of land about Benicia and Vallejo, together with the Suscol Rancho, has been declared United States Government land, I was obliged to make a light assessment in comparison with former assessments, which, together with the loss of stock, must have been half a million at least. I must say I am astonished to see the assessment so large as it is, for I assure you I have invariably assessed property lower than formerly assessed.

For fear I am burdening your patience in my lengthy report, let me say, notwithstanding the Government under which we live and are willing to fight for is distracted, and being impoverished by a desolating rebellion, we of Solano were never more at our ease, never more comfortable, prosperous, and happy.

CYRUS AYER,
County Assessor.

TEHAMA COUNTY.

SAMUEL ENGLISHCounty Assessor.

OFFICE COUNTY ASSESSOR,
Tehama County, Nov. 13th, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In accordance with my duty, as prescribed by law, I herewith enclose to you the report of my labors as Assessor for the fiscal year eighteen hundred and sixty-two. I much regret that it is not in my power to furnish you with as complete a report as your blanks would indicate necessary, but the cause was such as I could not possibly control, and hence must of necessity send it in its incomplete state.

Without entering into detail, I refer you to the schedule enclosed, as showing an approximately true list of the wealth and resources of this county; and in doing so I cannot refrain from calling your attention to the fact that, within the boundaries of this county, and occupied by actual settlers, there are in the vicinity of from twenty-five to fifty thousand acres of unsurveyed land enclosed, partially cultivated, and to a large extent improved, and on which there is not one dollar of taxes can be levied. From such a state of facts you will at once see that not only our county, but the State also, is greatly the loser thereby.

By a late law of Congress, passed, I believe, last winter, the whole matter is left in the hands of the United States Surveyor-General for this State, and I am strongly inclined to think, were the matter brought to his notice in the proper manner, a large portion of this land, if not all, might be made to yield a handsome revenue to the county, State, and the General Government.

In this county there are five whole, and four fractional parts of grants, embracing in the aggregate, seventy-seven thousand seven hundred and forty-eight acres of land. Outside the lines of and adjoining these grants, are all fractions of land which have never been surveyed, and consequently are not in market; of course the settlers can have no other title than that of mere possession. Could this land be surveyed and thrown open to legal location, I am satisfied the balance in favor of both county and State would be largely increased.

In addition to the above, we have the Nome Lackee Indian Reservation, supposed to contain two thousand five hundred acres of land. At this time it is only nominally a reservation. The buildings and improvements are in ruins, and were it not for the presence of a few miserable Indians, who, from affection, still frequent the hunting grounds of their fathers, and glean a scanty subsistence therefrom, would be entirely deserted. Were this fair tract of land, (the finest in the upper Sacramento Valley,) and the fractions outside of its boundaries, secured to actual settlers, we might flatter ourselves that but few counties in our Golden State could outstrip in the march to wealth that which lies near the navigable head of the Sacramento.

Since the report of my predecessor, our Senator, J. G. Doll, Esq., has secured a franchise from the Legislature, to construct a turnpike road from the Town of Red Bluff to Honey Lake Valley, but as yet, little or no action has been taken in the premises. The importance of the road to the interests of the whole county, no one undervalues—it is only the money that is wanting, and which the friends of the enterprise are afraid cannot be raised in time to do any good this season. The subject, however, is agitated, and I think will not be laid until we have a road leading to the untold wealth of the eastern mountains.

In regard to industrial enterprises, I may mention that, in connection with four or five of the finest grist mills in the State, there is a project on foot to introduce a woollen mill into the county. A company from San Francisco have recently purchased the large grant until recently owned by J. F. Dye, containing some one thousand seven hundred acres, and they intend to convert a fine grist mill already on the premises into a mill of the above description. I need scarcely say that the benefits likely to arise therefrom to wool-growers in this county can scarcely be overestimated.

Regarding agricultural products, I have only to say that whatever can be raised elsewhere in the State can also be raised with us. Cotton, to a small extent, and simply as an experiment, has been tried, and proved successful. Tobacco is indigenous to the soil, and whenever the tame seed has been planted, and even the most ordinary attention given to it, it has proved a bountiful crop.

With regard to wine, I would say that last year there were manufactured about fifteen hundred gallons from grapes grown in this county, which was pronounced by judges to be a very superior article.

Thousands of gallons of brandy might be manufactured from the wild grape, which grows very plentifully along the water courses in this section, but as yet no one has turned their attention in that direction.

As a wool growing county, taking into consideration the small extent of it compared with others, we believe it will vie with any other in the State. It is worth while to remark that in the future this branch of industry promises to be the most lucrative of any other in our midst.

In conclusion, I would remark that as regards fine horse stock, Tehama County is behind no other in the State. Of late years special attention has been given the subject, and the result is she can now produce as fine animals as can be found, I believe, on the American continent.

Regretting that time will not permit me to enlarge further, and hoping this will meet your approbation, I herewith submit the same.

SAMUEL ENGLISH,
Assessor of Tehama County.

TRINITY COUNTY.

G. F. MIERS.....County Assessor.

OFFICE COUNTY ASSESSOR,
Weaverville, November 7th, 1862. }

Hon. J. F. HOUGHTON,
Surveyor-General :

SIR:—In accordance with the laws of the State respecting the duties of County Assessors, I herewith transmit my report for the current year. It is not as full as I could wish, owing to the migratory character of our inhabitants, and to the fact that our agricultural operations are so limited, (being confined to small valleys and benches on the creeks and rivers,) the county being decidedly mineral, that it is impossible to arrive at anything like a correct estimate of the agricultural productions of the county. There is, however, a falling off since the last year; a good deal of our arable land having been destroyed by the high waters of last winter.

Our fruit crop is abundant, but of an inferior quality, the climate in a large portion of the county being unfavorable to the production of fine fruit.

Our mines, comprising surface, hill, and river diggings, are as extensive, and, with the exception of the river mining, in as flourishing condition as in previous years. The latter suffered severely from last winter's freshets, almost every wheel, flume, and ditch, having been destroyed, and the miners have not fully recovered from their losses. This, with the destruction of the numerous bridges over Trinity river, will account for the falling off in the amount of our taxable property, none of the bridges being completed in season for this assessment.

We are well supplied with the timber usually found throughout the State.

We have made some improvement both in the quality and number of our roads, having constructed two roads by private enterprise, one from Weaverville to Trinity Centre, a distance of twenty-nine miles, connecting at the latter place with the road from Shasta to Yreka; also, one from Lewiston, at the mouth of Rush creek, to Weaverville, a distance of twelve miles.

We have six schools, which will compare favorably with other country schools throughout the State.

For full particulars please refer to schedule enclosed.

All of which is respectfully submitted.

G. F. MIERS,
Assessor of Trinity County.

YOLO COUNTY.

G. J. OVERSHINERCounty Assessor.

OFFICE COUNTY ASSESSOR,
Woodland, Nov. 1st, 1862. }Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In compliance with the law, and in conformity to the custom of my predecessors, I would most respectfully transmit the enclosed copy of the statement of the condition of the resources and improvements of Yolo County, and if it is not as elaborate and complete as could be desired, it will serve as a slight index to form a judgment upon, and is as full and complete as the materials at hand will admit.

Yolo County, lying in the heart of the great Sacramento Valley, and watered so bountifully by the Sacramento river and Cache and Puttah creeks, presents one of the most desirable locations for the agriculturist or grazer within the State. The land lying contiguous to the streams has been so favorably disposed by the hand of nature that the greater portion of the arable land in the county is susceptible of irrigation, so that farmers, if they choose, can by a slight outlay render the condition of their crops wholly independent of the rains. This is a consummation much to be desired. Owing to the peculiar geographical position of this county it has suffered more from drought in former years than perhaps any other portion of Sacramento Valley. But the advantages and benefits of irrigation are becoming so prominent where it has been tested, that we may safely look forward to the time, not far distant, when all, or nearly all, the land lying between the foot hills and tule, will bloom and blossom under the influence of irrigation, when directed by the hand of the skillful agriculturist.

The *incubus* of Spanish grants has much retarded the progress and development of this county, but within the past year the tract claimed under the title of the "Rancho de Carmel," or "Knight," comprising eleven leagues, and covering the flourishing village of Knights Landing, has been rejected by the United States Supreme Court, thereby rescuing a large and valuable tract of land from the grasp of iniquity, and devoting it to the happy and prosperous homes of *freemen*.

The grant entitled the "Laguna de Santos Calla," lying on the north side of Puttah creek, comprising ten leagues, may be considered virtually abandoned, and improvements permanent and valuable are being erected by the settlers located thereon.

The titles to the other grants are either finally confirmed, or considered so secure that litigation concerning them has ceased, or nearly so; so that we can now look forward to the rapid development of all the agricultural resources of Yolo County. Her soil yields bountifully to the hand of industry, not only of the great staple productions, but "luscious Nature" has spread, with no stinted hand, *all* of the luxuries that spring from her bosom.

According to the statistics, we have :

LAND UNDER CULTIVATION.

Description.	Acres.
Land enclosed.....	110,000
Land cultivated.....	50,976
Wheat.....	25,000
Barley.....	16,000
Rye.....	75
Corn.....	150
Peas.....	50
Beans.....	25
Potatoes.....	350
Sweet Potatoes.....	110
Onions.....	30
Tobacco.....	7
Sugar Cane.....	40
Land cultivated in Fruit Trees and Vines, about.....	10,000

FRUIT TREES.

Of the number of fruit trees in this county, you will find a large falling off from the figures of last year, owing to the great destruction to that branch of agriculture from the floods of last winter. We have as follows :

Description.	Number.
Apple.....	31,400
Peach.....	88,500
Pear.....	13,300
Plum.....	9,500
Cherry.....	2,264
Nectarine.....	20,000
Quince.....	1,810
Apricot.....	4,808
Fig.....	500

VINES.

The vine growing interest is much increased from that of last year, and bids fair to become one of the first importance. We have :

Description.	Number.
Grape.....	234,430
Strawberry.....	10,000
Gooseberry.....	4,876
Raspberry.....	3,280

Of farm products, we have :

Wheat, bushels	750,000
Barley, bushels.....	560,000
Rye, bushels.....	3,000
Corn, bushels.....	6,000
Peas, bushels	2,500
Beans, bushels	802
Potatoes, bushels.....	100,000
Onions, bushels.....	6,000
Tobacco, pounds	5,500
Sugar Cane Syrup, gallons.....	6,000
Wine, gallons.....	600
Brandy, gallons.....	700

Thus will be seen, at a glance, the returns of the husbandman are no meagre quantities, but richly and lavishly is he remunerated.

MINERAL LANDS AND TIMBER.

Yolo is properly classed as an agricultural county, but the rich discoveries of quicksilver in the western part give indications of great mineral wealth yet to be developed. The timber is fit for nothing but fuel, and, with the exceptions of a part of the land watered by Cache creek, and that lying in the Coast Range, it is almost destitute of timber.

IMPROVEMENTS.

The educational and religious interests are assuming a rank that will place them beside those of more favored communities. There are twenty-three Public School houses in the county, many of them being built of brick, and furnished with a strict regard to the comfort and happiness of their occupants. The Hesperian College, located at Woodland, and now nearly completed, is an elegant brick structure, forty by sixty, three stories high, and capable of accomodating two hundred and fifty or three hundred students. It will cost, when completed, nearly twenty thousand dollars, and stands as an honorable testimony to the intelligence and enterprise of the surrounding country.

Our county seat has been permanently located at Woodland, near the centre of the county, and since its location a flourishing village is springing up at this place, and evidences of improvement and prosperity greet the eye on every hand.

The Marysville and Benecia Railroad is graded through the centre of the county, but remains in statu quo, owing to the disorganized condition of affairs on our eastern shores.

There are three grist mills and one saw mill in this county: one located at Knight's Landing, owned by Mr. Gardner; one near Woodland, owned by Mr. Cook; and one at Woodland, owned by Gurlock & Freeman. The first two have been doing a good business. The one at Woodland is just completed, and will prove a valuable acquisition to the people of Yolo County. The saw mill is owned by Messrs. L. S. Hunt & Co., of Washington, and has been doing a very extensive business, but owing to the

heavy losses of lumber during the floods, they were prevented making as lengthy a run as they would otherwise have done.

The Cacheville Agricultural Ditch is fully realizing the expectations of its projectors. This ditch is five and a half miles long, twenty feet wide, and six feet deep, and was constructed at a cost of twenty thousand dollars (\$20,000.) Gardens, orchards, and vineyards are being located in the vicinity of its branches, ornamenting and improving the surrounding country. The water works of Messrs. Hunt & Co., attached to their mill in Washington, has added much to that establishment. They have laid about two thousand feet of pipe, at a cost of three thousand dollars.

There are three distilleries, capable of distilling from one hundred to one hundred and fifty gallons per day. Two of them are located in the vicinity of Cache creek.

LIVE STOCK.

Owing to the severity of the winter, the heavy losses of cattle will greatly diminish the number reported last year. We report as follows :

Description.	Number.
Horses.....	4,806
Mules.....	392
Asses.....	7
Cattle.....	13,460
Sheep.....	46,800
Hogs	14,800

While the number of our herds are decreasing, it is gratifying that they are improving greatly in quality. The uncouth Spanish horse is disappearing before the noble specimens of improved blood, and the wild cattle are giving place to the Durham and Devon.

ASSESSED VALUATION FOR EIGHTEEN HUNDRED AND SIXTY-TWO.

Total assessed valuation of all species of property, for the present year.....	\$2,322,975 00
Total taxes assessed on all property in the county.....	38,793 70

Notwithstanding the great destruction to all kinds of property during the past winter, the assessed valuation shows a large increase over that of last year, speaking loudly in favor of the general prosperity of this county.

Total assessed valuation for eighteen hundred and sixty-two.....	\$2,322,975
Total assessed valuation for eighteen hundred and sixty-one	2,156,482
Increase for eighteen hundred and sixty-two.....	\$166,493
Losses sustained by this county during last winter may safely be estimated at.....	200,000
Real increase during one year.....	\$366,493

TAXES.

State tax on each \$100.....	\$ 62
County tax on each \$100	45
Road tax on each \$100.....	15
School tax on each \$100	15
Hospital tax on each \$100.....	15
National tax on each \$100.....	15
Total tax on each \$100	\$1 67

In conclusion I would refer you to the County Surveyor's report respecting the tule lands of the county, the benefits of their reclamation, etc., of the streams that water the county, and other topographical features that will come more immediately under his department of labor. Enclosed you will find my statistical tables, and although deficient in many things that I desired, I trust it will serve the end intended, and receive your approbation.

With high esteem,
I remain yours respectfully,

G. J. OVERSHINER,
County Assessor.

YUBA COUNTY.

T. J. SHERWOODCounty Assessor.

OFFICE COUNTY ASSESSOR,
Marysville, November, 1862. }

HON. J. F. HOUGHTON,
Surveyor-General :

SIR:—In compliance with your request and with the law, I have the honor to submit my report for the current year. I find it almost impossible to comply strictly with the requirements of the law, but have done so to the best of my ability :

Number of square miles in Yuba County.....	616
Population of County in 1860.....	14,000
Number of voters in 1861.....	4,298
Number of voters in 1862.....	3,365
Assessed valuation of Real Estate.....	\$1,221,272 00
Assessed valuation of Improvements.....	1,512,091 00
Assessed valuation of Personal Property.....	2,289,061 00
Total assessed valuation of property..	\$5,022,424 00
Total amount of Taxes on same.....	134,627 47
Total assessed value of property, 1861.....	\$6,187,773 00
Thus showing the assessed value of property for the present year to be (less than last year)....	\$1,165,349 00

Which is accounted for in the following manner: Eighty-four head of horses, two thousand three hundred and fifty head of cattle, eight thousand four hundred and thirty-eight head of sheep, eight hundred and thirty-four head of hogs, and one hundred and fourteen stands of bees, were lost during the floods of last winter. Also, several mining ditches, and several bridges, were taken off by the same cause. Then, there is a great depreciation in the value of lands along the Feather and Yuba rivers. Among the fine farms which have been almost entirely destroyed, there are those of C. L. Low, J. C. Fall, C. H. Hedges, C. Covillaud, N. Wescoatt, J. H. Ramirez, G. Woodward, Mrs. H. P. Haun, Mrs. C. Kimmerling, William McCullough, Dr. Teegarden, S. P. Pomyea, G. G. Briggs, and a great many others, too numerous to mention, all of which were damaged more or less by the floods of last winter; and it will be remembered that on the ninth day of December, eighteen hundred and sixty-one, the Merchants' Hotel, and other buildings near it, fell down from the effects of the high water. In February, before I had commenced assessing, a petition was circulated in the City of Marysville, and signed by a large number of the tax payers of the city, which petition was laid before the Board of Supervisors, praying for them to so fix the rates of taxation that their property should be assessed at its actual cash value, (it having been assessed heretofore at what they termed a fictitious valuation). The Supervisors called my attention to the petition, and requested me to comply with the same as near as I could and comply with the law, which I did to the best of my abilities. And after making the assessment on the city property, I find, from a close comparison, that there is a deduction from last year on real estate and improvements of five hundred and forty-eight thousand three hundred and eighty-four dollars, (\$548,384,) and yet I think that property in the city is assessed at as much as it is worth.

You will also see from the following report, the number of Poll Taxes collected up to November first:

State Poll Taxes.....2,535 amounting to.....	\$5,684
Federal Poll Taxes...2,582 amounting to.....	5,164
There were collected last year of State Poll Taxes, 1,517, amount- ing to.....	3,034
Showing an increase over last year of.....	2,650

And there will undoubtedly be some two hundred or more collected yet this year.

Enclosed you will please find schedule of statistics.

All of which is respectfully submitted.

T. J. SHERWOOD,
Assessor of Yuba County.

ANNUAL REPORT

OF THE

Surveyor-General of California,

FOR

THE YEAR 1863.

O. M. CLAYES.....STATE PRINTER.

ANNUAL REPORT.

SURVEYOR-GENERAL'S OFFICE,
Sacramento, November 20th, 1863. }

To His Excellency,
LELAND STANFORD,
Governor of California :

SIR:—In compliance with the requirements of the law defining the duties of this office, I have the honor to submit for your consideration the following report for the year ending November twentieth, eighteen hundred and sixty-three.

I am, very respectfully,

Your obedient servant,

J. F. HOUGHTON,
Surveyor-General and Register of State Land Office.



REPORT.

STATE LANDS.

This subject is one of such general importance to a very large number of our citizens who have, under the various Acts of our Legislature, become purchasers of the State, that anything which tends to enlighten them upon the nature of the title which they have derived, or are to derive, and how soon that title will be placed beyond peradventure and all possible contingency, is possessed of more than common interest.

This fact has induced me to place this subject in the foreground in this report, and to review it somewhat at length. The fact, that thirteen years have elapsed since the Swamp and Overflowed Lands, and ten years since the School, Seminary, and Public Building Lands were donated to the State, and to this day not a single acre has the State received a patent for, of itself speaks of a fault somewhere.

This fault lies partly with the State authorities for their remissness in not early taking the proper steps to have them certified to the State. But, that the fault is not all chargeable to the State, I propose to show in this report, and in order to do so, I beg leave to direct your attention to the following circular letter, addressed by the honorable Commissioner of the General Land Office, at Washington, to the Registers of the several United States Land Offices in this State, for their guidance in the selection of School Lands under the Act of Congress of March third, eighteen hundred and fifty-three :

[Circular applicable to Selections for School Purposes in California.]

GENERAL LAND OFFICE,
August 21st, 1862. }

GENTLEMEN :—The object of this circular letter is to secure uniformity of action in making selections for School purposes under the following Acts of Congress :

The sixth section of the Act of March third, eighteen hundred and fifty-three, entitled an Act to provide for the survey of the Public Lands in California, the granting of pre-emption rights therein, and for other purposes, grants to the State of California sections sixteen and thirty-six in each township for School purposes; and the seventh section

of the same Act provides: "That when any settlement, by the erection of a dwelling-house, or the cultivation of any portion of the land, shall be made upon the sixteenth and thirty-sixth sections before the same shall have been surveyed, or where such sections may be reserved for public uses or taken by private claims, other land shall be selected by the proper authorities of the State in lieu thereof, agreeably to the provisions of the Act of Congress, approved the twentieth of May, eighteen hundred and twenty-six, entitled an Act to appropriate lands for the support of Schools in certain townships not before provided for, and which shall be subject to approval by the Secretary of the Interior." (See Statutes at large, Vol. X, pp. 246, 247.)

The Act of the twenty-sixth of February, eighteen hundred and fifty-nine, (United States Statutes at large, volume XI, page three hundred and eighty-five,) provides "That where settlements, with a view of pre-emption, have been made before the survey of the lands in the field, which shall have been found to have been made on sections sixteen and thirty-six, said sections shall be subject to the pre-emption claim of such settler; and if they or either of them shall have been reserved or pledged for the use of Schools or Colleges in the State or Territory in which the lands lie, other lands of like quantity are hereby appropriated in lieu of such as may be patented to pre-emptors; and other lands are also hereby appropriated to compensate deficiencies for School purposes where said sections sixteen and thirty-six are fractional in quantity, or where one or both are wanting by reason of the township being fractional, or from any natural cause whatever; *provided*, that the lands appropriated by this section shall be selected and appropriated in accordance with the principles of adjustment and the provisions of the Act of Congress of May twentieth, eighteen hundred and twenty-six, entitled an Act to appropriate lands for the support of Schools in certain townships not before provided for."

Under the provisions of the foregoing Acts of Congress, where either of said sections sixteen and thirty-six, or any part thereof, has been sold or otherwise disposed of, the State will be entitled, in lieu of the land so disposed of, to an equal amount of other land, as contiguous to the School sections as may be.

The selections must be made of agricultural—not mineral—lands, as contiguous to the School sections "as may be," and in legal subdivisions, according to the approved official township plats of the public surveys on file in the Register's office at the time the selections are filed.

The School Selecting Agent should file in your office an authenticated copy of his letter of appointment, or other satisfactory evidence of his official character.

Under the provisions of the aforesaid Act of eighteen hundred and fifty-nine, where said sections sixteen and thirty-six are fractional in quantity, or where either of them are wanting by reason of the township being fractional, or from any natural cause whatever, the State will be entitled to other lands as indemnity for such deficiencies, to be selected and appropriated in accordance with the principles of adjustment and the provisions of the Act of Congress of May twentieth, eighteen hundred and twenty-six, viz: For each fractional township containing a greater quantity of Public Land than three quarters of an entire township, that is—more than seventeen thousand two hundred and eighty acres, the State will be entitled to two sections, or twelve hundred and eighty acres.

For each fractional township containing a greater quantity of Public Land than one half and not more than three quarters of a township, that is—more than eleven thousand five hundred and twenty acres, and less than seventeen thousand two hundred and eighty acres, the State will be entitled to one and a half sections, or nine hundred and sixty acres.

For each fractional township containing a greater quantity of Public Land than one quarter and less than one half of a township, that is—more than five thousand seven hundred and sixty acres, and less than eleven thousand five hundred and twenty acres, the State will be entitled to one section, or six hundred and forty acres.

For each fractional township containing a greater quantity of Public Land than one entire section and less than one quarter of a township, that is—more than six hundred and forty acres, and less than five thousand seven hundred and sixty acres, the State will be entitled to a half section, or three hundred and twenty acres.

The law directs that the selections shall be made by the Secretary of the Interior, and the following rules are prescribed for your government :

First—When the lands have not been offered at public sale, the selections are to be made prior to said sale. The School Agents may recommend the selections, and it may be proper for you to give notice to such Agents, that prior to a certain day, to be fixed by you, recommendations will be received from them for School selections for certain townships, which townships will be specially designated in said notice. You will bear in mind, however, that no expense whatever will be incurred in the publication of such notice. If the School authorities, after service of notice, should fail to make any recommendations, you will report your own selections.

Second—The quantity of School Lands selected for any township is to be located within the limits of such township, provided a sufficient quantity of good agricultural land exists therein. If you are satisfied that a sufficient quantity of good land cannot be found therein, the selection is to be made in the nearest adjacent township wherein good land exists.

Third—Where a portion of section sixteen or thirty-six exists in a township, an additional quantity only is to be selected as will, with the existing portions of said selections, make up the full quantity to which the township is entitled under the law.

Fourth—The selections of a section, three quarters of a section, or a half section, for any one township, are to be made in one body of land, if practicable ; if not, in separate "quarter sections." A less quantity than one quarter section is not to be taken. Fractional sections are to be excluded, except in cases where a portion of section sixteen or thirty-six exists in the township, and a selection has to be made of the balance of the quantity of land to which such township is entitled, and where the quantity cannot be located on a quarter or a half-quarter section ; in such cases only may fractional sections be taken according to the legal subdivisions, to make up the deficiency in quantity as nearly as practicable.

Fifth—In those townships and fractional townships fronting on bayous, rivers, lakes, or water courses, wherein the regular mode of surveying may have been departed from under the authority of law, and where a portion of the land consists of lots fronting on such bayou, river, lake, or water course, and running back for quantity, and where there has been irregularity in numbering the sections, in such cases, where sections sixteen and thirty-six happens to fall on one of the small lots on the

water courses, or a section containing less than the proportional quantity of School Land to which such township is legally entitled, such lot Number Sixteen or Thirty-six should be reported by you in your abstract of proposed selections, and in addition thereto so much of the section, whatever its number may be, as covers the ground which Number Sixteen or Thirty-six would have covered had the township been regularly numbered, as will make the complements of School Land to which such township is entitled.

Sixth—Fractional townships, created by Indian Reservations, are not to be understood as coming within the meaning of the Act, as when the township is completed it will then have its proper School Land.

Seventh—When a township falls *wholly* within the limits of a private claim, there is no Public Land, and no grant for School purposes, in said township; nor is the State entitled under any law to indemnity for the School sections which would otherwise exist in said township, any more than they would be if the township were entirely covered by a lake or navigable stream, and no selections are to be made in such cases; nor will the State be entitled to indemnity for sections sixteen and thirty-six which may fall on mineral land.

Eighth—The selections under this Act, as well as under the Act of eighteen hundred and fifty-three, must be made in legal subdivisions, according to the official township plats of the public surveys on file in the local office at the time the selections are made or recommended to be made.

Ninth—The law allows selections to be made of surveyed lands, whether offered or unoffered, but no selection is admissible upon any land to which a pre-emption or other valid claim shall be legally established; nor on any land which is or may be reserved from sale by any law of Congress, or proclamation of the President of the United States; nor upon any tract which is reserved or withdrawn from market for any purpose whatever; nor upon any mineral land. It is therefore necessary that the Agent of the State, in making the selections, should make such careful preliminary examinations as will enable him to select lands to which there may exist no valid claim by pre-emption or otherwise, which are not mineral, and to avoid embarrassment and delay consequent upon such conflicts, you will also examine the plats, records, and files of your office, and see that the selections are in all respects free from objections, and will certify that they are free from conflicts before the lists are reported to this office.

Herewith you will receive forms to be used for selections under the respective Acts. The forms for selections under the Acts of eighteen hundred and fifty-three and eighteen hundred and fifty-nine require the date to be given when the list is filed in your office, being the date when the same takes effect, and that it be certified and signed by the Locating Agent of the State, and certified by you as to the correctness of the same, before reporting to this office.

The form for *proposed* selections, under the Acts of eighteen hundred and fifty-nine and eighteen hundred and twenty-six, must also be certified by you, and if recommended by the State authorities, that fact should also be stated thereon.

The list of selections under the respective Acts should bear a regular but *separate and distinct series of numbers* from Number One.

The tracts selected should be distinctly entered in lead pencil on your Tract Books, and on the township plats, and be withheld from sale

until you are officially advised of their approval or rejection by the Secretary of the Interior.

When advised of the approval of such selections you will proceed at once to enter the same permanently, in red ink, in your Tract Books and on your township plats, and opposite the entry in the Tract Books you will note the date of the approval, making reference by its date to the letter from this office advising you of such approval.

In case of the rejection of a proposed selection, you will not fail to remove, by India rubber, the pencil marks on the township plats, and make entry of the facts in your Tract Books.

You will retain a record of all lists reported to this office, and when approved you will note the fact thereon and refer to the date of the letter communicating such advice.

Applications for the selection of School Lands by the State can only be received and filed by you where the land is surveyed and the official township plats on file in your office.

The State authorities will have no right to sell or dispose of any of the lands selected until they shall have been furnished with certified lists of the approval by the Secretary of the Interior.

You will acknowledge the receipt of this circular.

Very respectfully,

Your obedient servant,

J. M. EDWARDS,
Commissioner.

REGISTER AND RECEIVER LAND OFFICE, Marysville, California.

It will be observed that some parts of this letter are directly in conflict with the laws of donation and with the laws of this State providing for the sale of such lands. The honorable Commissioner says: "The law directs that the selections shall be made by the Secretary of the Interior," while the wording of the Act, as will be seen by section seven, is as follows: "Where any settlement, by the erection of a dwelling house, or the cultivation of any portion of the land, shall be made upon the sixteenth and thirty-sixth sections before the same shall be surveyed, or where such sections may be reserved for public uses, or taken by private claims, other land shall be selected *by the proper authorities of the State in lieu thereof*, agreeably to the provisions of the Act of Congress, approved May twentieth, eighteen hundred and twenty-six, and which shall be subject to approval by the Secretary of the Interior;" which last named Act regulates the quantity which shall be selected for townships which are fractional—said selections being made from lands in the same district in which said fractional township is situated.

The honorable Commissioner further says: "Where a township falls wholly within the limits of a private claim, there is no Public Land and no grant for School purposes in said township, nor is the State entitled to indemnity for the School sections which would otherwise exist in such township any more than they would if said township were entirely covered by a lake or navigable stream."

A careful consideration of the Act of Congress of March third, eighteen

hundred and fifty-three, has not only failed to convince me of the correctness of the above conclusion of the Commissioner, but has fully satisfied me that he is wrong, as will be seen by reading section seven of the Act as quoted above; nor can I think the honorable Commissioner, in making such decision, was imbued with the spirit of the Government—which has become a part of the settled and most cherished policy of our country—to assist in the support of Public Schools in every township in the land. This policy is manifested in various Acts of Congress from the year seventeen hundred and eighty-five to the present time.

Between the years seventeen hundred and eighty-five and eighteen hundred and forty-eight, section sixteen, in every township of every State or Territory organized between those dates, was granted to the State or Territory for the support of Public Schools, and in all cases where said section sixteen was covered by a private claim, or had been taken for public use, other lands were granted in lieu thereof.

The Act of Congress of March second, eighteen hundred and seven, providing for the disposal of the Public Lands south of the State of Tennessee, made provision that whenever section sixteen fell upon lands which had already been granted by any Act of Congress, or within any *British Grant*, the Secretary of the Treasury should locate another section in lieu thereof for the use of Schools.

The Act of April eighteenth, eighteen hundred and eighteen, to enable the people of the Illinois Territory to form a Constitution and State Government, etc., also, the Act of March third, eighteen hundred and nineteen, giving the same privileges to the people of Alabama Territory, both authorize the selection of other lands in lieu of section sixteen, when, from any cause, such section has been disposed of.

Within the limits of the State of Indiana, at the time of her admission into the Union, there existed a large tract of land, covering entire townships, known as Clark's Grant; yet Congress, by Act approved May seventh, eighteen hundred and twenty-two, authorized the Register of the United Land Office at Brookville to select for School purposes other lands in lieu of such sixteenth sections as were covered by said grant. A similar provision was made in regard to the Vincennes donation. A similar provision was made upon admission of Missouri into the Union, within whose borders existed large grants.

The Act of May twentieth, eighteen hundred and twenty-six, is very particular in its provisions, that not only every whole township not before provided for shall have its section of land, but that every fractional township shall have its proper proportion of land for the support of Common Schools.

The Act of May twentieth, eighteen hundred and thirty, to authorize the selection of certain School Lands in the Territory of Arkansas, provides that: "Whenever section sixteen in said Territory, either wholly or in part, is now or may hereafter be included in private claims held by titles confirmed or legally declared valid, other lands equivalent thereto may be selected."

Previous to the admission of the State of Ohio into the Union, a large portion of that State belonged to the State of Connecticut, commonly known as the "Connecticut Western Reserve," provided that "the President of the United States is hereby authorized and required to reserve from sale out of any Public Lands that have been heretofore offered for sale, and that remain unsold, in the State of Ohio, a quantity of land, which, together with the lands heretofore granted for the support of Schools in said Connecticut Western Reserve, shall be equal to one thirty-

sixth part of said Western Reserve, and the same shall be vested in said State for the support of Schools in said Western Reserve."

A similar Act was approved June eighteenth, eighteen hundred and forty-four, in favor of the Territories of Florida, Iowa, and Wisconsin, in which were grants covering entire townships, providing for the selection of other lands in lieu of section sixteen, whenever covered by such grants, or in any way disposed of.

The Act of February fourteenth, eighteen hundred and forty-eight, admitting Oregon into the Union, provides: "That sections sixteen and thirty-six in every township of Public Lands in said State, and where such sections, or any part thereof, have been sold or otherwise disposed of, other lands equivalent thereto shall be granted to said State for the use of Schools;" and since that date every State admitted into the Union has received for the benefit of its Public Schools sections sixteen and thirty-six in every township within its limits.

Various other Acts might be quoted from, showing conclusively that no policy of the Government has been more firmly established or more strictly followed, than that of allowing to every State a section, and since eighteen hundred and forty-eight two sections of land, for the use of Schools in every township in the State, and of placing these donations past all and every contingency, by providing that in every instance where such sections have been taken by private claims or for public uses, other land equal in quantity shall be selected for such.

The Act of March third, eighteen hundred and fifty-three, under which our State claims its one-eighteenth portion of every township in the State is, if possible, more positive and definite than any other enactment upon this subject. None of the Acts previously referred to make a positive and immediate grant of these sections to the State, but section six of the Act of March third, eighteen hundred and fifty-three, reads as follows:

"And be it further enacted, That all the Public Lands in the State of California, whether surveyed or unsurveyed, with the exception of sections sixteen and thirty-six, which shall be, and hereby are, granted to the State for the purposes of Public Schools, in each township, and with the exception of lands appropriated under authority of this Act, or reserved by competent authority, and excepting also the lands claimed under any foreign grant or title, and the mineral lands, shall be subject to the pre-emption laws of the fourth of September, eighteen hundred and forty-one," etc.

I desire particular attention to the words "*shall be, and hereby are,*" as they occur in this section, and also the words in the seventh section, before quoted, providing that when either of these sections have been taken by private claims or for public uses, "*other land shall be selected by the proper authorities of the State in lieu thereof.*"

It seems very clear to me, that this wording made the grant positive and immediate, requiring only on the part of the State the selection of these sections, or land in lieu thereof, and notice to the local Agents of the United States of such selections, to vest in the State a full and perfect title.

In regard to the right of the State to select unsurveyed lands in part satisfaction of the School Land grants, I will simply refer to the decision of our Supreme Court in the case of *Doll v. Meador*, 16 Cal. 315, in which Chief Justice Field, delivering the unanimous opinion of the Bench, re-

ferring to the Act of Congress of September fourth, eighteen hundred and forty-one, granting to every new State upon admission into the Union five hundred thousand acres for purposes of internal improvement, and which Act does not define so clearly the rights of the State as does the Act of March third, eighteen hundred and fifty-three, uses the following language, viz :

“It is to be observed that with reference to the States referred to in the first section of the Act, the selections and locations are to be made after the lands of the United States in those States respectively have been surveyed according to existing laws. But with reference to the new States, the time of selection and location is not designated. The concluding words of the grant to them, providing that the land is ‘to be selected and located as aforesaid,’ refer, as we conceive, only to the manner and form of the selection and the quantity which the several parcels must embrace. Conformity in the locations with the sectional divisions and subdivisions is required to preserve intact the general system of surveys adopted by the Federal Government, and to prevent the inconvenience which would ensue from any departure therefrom. When, therefore, any location is made by the State previous to the survey of the United States, it must be subject to change, if subsequently, upon the survey being made, it be found to want conformity with the lines of such survey.”

And in a supplemental decision made in the same case, Chief Justice Field says, “The Act of September fourth, eighteen hundred and forty-one, does, as we stated, require the locations of the State to be made conformably to sectional divisions and subdivisions, but does not require the State to postpone the selections until the survey of the United States.” Notwithstanding the clear and explicit wording of the Act, the honorable Commissioner decides, as before quoted, that where an entire township is covered by a grant, we are entitled to no lands in lieu of the sixteenth and thirty-sixth sections so covered; that selections must be made by the Secretary of the Interior, and that no lands can be selected until surveyed by the United States.

Again, the Commissioner of the General Land Office, in a communication to United States Surveyor-General Beale, dated October, eighteen hundred and sixty-three, giving instructions in regard to lists of Swamp and Overflowed Lands belonging to the State to be forwarded to the Land Office at Washington, uses the following language :

“You should exclude from your lists all tracts which may have been reserved or in any manner disposed of by the Government, or upon which there may exist *inchoate rights*, either under the *pre-emption*, *homestead*, or other laws of the United States. In a word, you should report only vacant and unencumbered tracts.”

The pre-emption laws were never extended to California until the Act of March third, eighteen hundred and fifty-three, and the homestead law went into effect on the first of January, eighteen hundred and sixty-three; while, by the Act of September twenty-eighth, eighteen hundred and fifty, all the “Swamp and Overflowed” Lands remaining unsold at the date of the Act were granted to the State—three years before the pre-emption laws were extended to this State, and thirteen years before the Homestead Act went into operation; yet the honorable Commissioner,

entirely disregarding the rights of the State, instructs the United States Surveyor-General for California to permit locations of pre-emptions and homesteads upon lands which, by positive congressional enactment, belong to the State.

Other cases occur in which the State has selected and sold unsurveyed lands in part satisfaction of the five hundred thousand acre grant, and in lieu of the sixteenth and thirty-sixth sections covered by grants, which selections the Commissioner has decided to have been improperly made, and subject to pre-emption. While this difference continues, injury must result to both classes of claimants, and a fruitful ground of quarrel and litigation be presented.

I would strongly urge that our delegation in Congress be requested to prepare and press to its passage such a bill as is indicated by the joint resolutions of the Senate and Assembly, adopted April twenty-fourth, eighteen hundred and sixty-three, and which is subjoined :

“WHEREAS, The State of California, through her officers properly authorized by law, has made selections of land from the public domain in part satisfaction of the various donations made to the State by Acts of Congress; and, whereas, the State has made sales of the lands so selected to purchasers, in good faith, received whole or partial payments therefor, and has issued certificates of purchase or patents to such purchasers for the land so selected, thereby pledging her honor to the procurement of good and sufficient titles to the same; and, whereas, the honorable Commissioner of the General Land Office at Washington, giving a different construction to some of the said laws of donation from that entertained by the authorities of the State, has decided many of such selections to have been improperly made; be it, therefore—

“*Resolved*, By the Senate, the Assembly concurring, that our Senators and Representatives in Congress are hereby requested to procure the passage of a law which shall provide that wherever the proper authorities of a State have in good faith selected any portion of the public domain in part satisfaction of any grant made to the State by any Act of Congress, and have sold the same in good faith, the said selections shall be confirmed to the State; and the State hereby pledges herself that if, upon final investigation and decision, it shall appear that the State has selected any lands to which she is not entitled, she shall pay into the Sub-Treasury of the United States at San Francisco, to the credit of the United States, the sum of one dollar and twenty-five cents for each and every acre of land so determined to have been improperly selected.

“*Resolved*, That a copy of these resolutions be immediately sent by the State Register, under his seal, to the honorable Secretary of the Interior, and one copy to the honorable Commissioner of the General Land Office at Washington.”

In compliance with the last resolution, copies of these resolutions, duly authenticated by signature and seal of the Secretary of State, were sent under the seal of the Register of the State Land Office, separately, to the honorable Secretary of the Interior and to the honorable Commissioner of the General Land Office at Washington, accompanied, in each case, by the following communication from this office :

STATE LAND OFFICE,
Sacramento, Cal., May, 1863. }

To the Honorables the Secretary of the Interior and the Commissioner of the General Land Office, Washington, D. C. :

GENTLEMEN :—I have the honor to transmit herewith a series of resolutions passed by the Legislature of this State, upon my suggestion, at its session just concluded, which I propose to make a basis of settlement of all questions of difference between the United States and State authorities in regard to the several donations of land made by different Acts of Congress to this State.

The most important matter in this connection is a difference between the honorable Commissioner of the General Land Office and the State authorities in the construction of the Act of March third, eighteen hundred and fifty-three, so far as relates to the donation of the sixteenth and thirty-sixth sections in each township for School purposes.

Section six of the said Act reads as follows: "*And be it further enacted, That all the Public Lands in the State of California, whether surveyed or unsurveyed, with the exception of sections sixteen and thirty-six, which shall be, AND HEREBY ARE, granted to the State for the purposes of Public Schools, in each township, and except, etc., are subject to pre-emption, etc.*"

Section seven of the same Act provides: "That where any settlement, by the erection of a dwelling house, or the cultivation of any portion of the land, shall be made upon the sixteenth and thirty-sixth sections, before the same shall be surveyed, or where any such sections may be reserved for public uses, or taken by private claims, other lands shall be selected *by the proper authorities of the State in lieu thereof,*" agreeably to the provisions of the Act of Congress, approved on the twentieth day of May, eighteen hundred and twenty-six, entitled an Act to appropriate lands for the support of Schools in certain townships and fractional townships not before provided for, and which shall be subject to approval by the Secretary of the Interior.

This last named law of May, eighteen hundred and twenty-six, simply regulates the quantity which shall be given to each fractional township, according to the quantity of land in said fractional townships.

The Legislature of this State, after a careful consideration of the Act of donation, regarded it as an absolute, present grant, requiring on their part, if the lands had been surveyed either by the United States or State authority, no action whatever to vest in the State complete and perfect title to every sixteenth and thirty-sixth section of every township in the State, except when the same had been reserved, settled upon, or taken by private claims, in which case it was only necessary for the *proper authorities of the State* to select other lands in lieu thereof upon any surveyed or unsurveyed lands, and give notice of all such selections to the Register of the United States Land Office for the district in which the lands were situated, to vest in the State the same complete and perfect title.

The Legislature of the State, in accordance with the above views, have passed laws providing for the sale of said lands, but in no case have they sold any of those lands, or given notice to the local Register of their selection of such lands in part satisfaction of the grant, until the following affidavits have been subscribed and sworn to before a proper officer and filed with the State Locating Agent :

Location No. ———. } State of California,
 ——— Land District. } County of ———.

I, ———, of ——— County, State of California, being duly sworn, depose and say, that I am an applicant for the purchase and location of the above described lands; and that to the best of my knowledge and belief there is no valid claim existing upon the land so described adverse to the claim I hold and apply to be located, and that there is no improvement of any description on said land other than my own.

Witness my hand,

Sworn and subscribed to before me,
 this ——— day of ———, A. D. 186—.

We, ——— and ———, of ——— County, State of California, being duly sworn, each for himself deposes and says, that he is acquainted with the lands described in the above application, and sought to be located by the above named ———; that there is no valid claim existing upon the land so described adverse to the claim above made, to the best of his knowledge and belief; and that he neither has nor expects to have any interest, directly or indirectly, in the claim so desired to be located by said ———.

Witness our hands,

Sworn to and subscribed before me,
 this ——— day of ———, A. D. 186—.

These affidavits have been required in all cases of sales and selections of these lands, in order to protect the rights of settlers and to guard against frauds, the object of the State being to select in good faith only such lands as were absolutely vacant, and to which there could be no possible claim.

Under the laws above referred to the State has selected under this grant, and sold to purchasers, in good faith, about one hundred and fifty thousand acres of land in lieu of sixteenth and thirty-sixth sections, granted or otherwise disposed of, upon lands which have not been surveyed by authority of the United States, but which have been surveyed by State authority, and which selections the honorable Commissioner of the General Land Office has decided to have been improperly made, for want of the United States survey.

This decision has very naturally created much alarm and apprehension on the part of all purchasers from the State, and has placed the State in a very unpleasant position with regard to all these purchasers, who have in good faith made partial or full payments and received certificates of purchase, and promises of full and complete title at a future day, when the land shall have been certified to the State; and the State has, by the passage of the accompanying resolutions, given them further assurance of protection and eventual title.

I cannot but regard the proposition contained in these resolutions—in view of the fact that the Supreme Court of this State has, in the case of *Doll v. Meador*, affirmed the right of the State to make selections of un-

surveyed lands in part satisfaction of the five hundred thousand acre grant, and in view of the fact of the honorable Commissioner's decision, that all selections of land before the survey by authority of the United States have been improperly made and are void, and in view of the fact, that in consequence of this decision the titles of all these purchasers are in a confused and uncertain condition, and that no lands have been so selected upon which any claim whatever existed at the time of selection—as being but an act of justice to the United States and the purchasers.

It is now over ten years since this grant was made, and nearly thirteen years since the Swamp and Overflowed Lands were granted to the State, and not a single acre of any class of land has been confirmed or patented to us. I would be much pleased to know, at your earliest convenience, if the plan suggested in these resolutions meets your approval, and if you will co-operate with our delegation in Congress at its next session to procure the passage of such a law as is therein proposed, or of some law which shall protect at the same time the honor of the State, the purchaser in his title, and the Treasury of the Nation.

The honorable Commissioner of the General Land Office has, I am informed, instructed the Registers of the different United States Land Offices in this State that when an entire township is covered by a Mexican grant the State will not be entitled to any land in lieu of the sixteenth and thirty-sixth sections of the said township. A careful examination of all the laws which have been passed by Congress in regard to the support of Common Schools has convinced me that this opinion of the honorable Commissioner is not sustained by the Act of donation, which provides (see section seven) that where such sections may be reserved for public uses, or taken by private claims, (in which would be classed Mexican grants,) other land shall be selected by the proper authorities of the State in lieu thereof. Nor is it sustained by the general policy of the Government, which seems to have been, even up to the time of the passage of the Act of August fourteenth, eighteen hundred and forty-eight, to establish the Territorial Government of Oregon, to give one thirty-sixth part of all the Public Land in every new State perpetually for the support of Common Schools. In support of which view, I beg leave to refer you to the Act of May seventh, eighteen hundred and twenty-two, providing for the selection of lands in the State of Indiana for School purposes, equal to one thirty-sixth part of the reservation commonly known as Clark's Grant.

Also, to the Act of June nineteenth, eighteen hundred and thirty-four, providing for the selection of lands in lieu of School Lands covered by the "Connecticut Western Reserve" equal to one thirty-sixth part of that reserve.

Other Acts of Congress have provided for the selection of other lands in lieu of sixteenth sections covered by grants, in the States of Missouri, Tennessee, Indiana, Arkansas, Iowa, Florida, and other States and Territories. It has also been provided that when that section falls within a bay, lake, or navigable stream, or upon lands not suitable for cultivation, other lands could be selected in lieu thereof; showing conclusively the intention of Congress to provide for the support of Schools in every township, by a donation of one thirty-sixth portion of the whole area of any State or Territory. Since the Act of August fourteenth, eighteen hundred and forty-eight, organizing the Territory of Oregon, the thirty-sixth section has been added to the sixteenth, giving one eighteenth portion of the area of each State or Territory thereafter organized, and

applied specifically to the State of California by the Act of March third, eighteen hundred and fifty-three.

By this Act the State authorities claim the right to the sixteenth and thirty-sixth sections in the mineral districts, no reservation being made by the grant of these sections, as will be seen by a careful reading of the Act ; the only reservation being the right of pre-emption upon mineral lands. The State has made no selection or sale of any of these sections, or passed any law allowing their sale, and will, I presume, await a final decision of such right before doing so.

In consequence of the large amount of lands reserved from sale as mineral lands, the large amount covered by Mexican grants, and in consequence of the delaying of the Government surveys, the State is restricted to narrow limits in the selection of her School Lands, and does not enjoy the privileges which are accorded to all other States ; and, as a natural consequence, our School Fund does not provide the liberal support which Congress has always contemplated.

The State authorities have in the same manner made selections, amounting to about fifty thousand acres, upon unsurveyed lands, in part satisfaction of the grant of five hundred thousand acres, which are, by the decision of the honorable Commissioner, placed in the same condition as the lands taken in lieu of the sixteenth and thirty-sixth sections.

By an Act of Congress approved September twenty-eighth, eighteen hundred and fifty, entitled an Act to enable the State of Arkansas and other States to reclaim the Swamp Lands within their limits, the provisions of which Act were, by section four, extended to each of the other States of the Union, there was granted to the State of California "all those Swamp and Overflowed Lands, made unfit thereby for cultivation," which remained unsold at the date of the passage of the Act, and by instructions from the Commissioner of the General Land Office to the United States Surveyor-General of California, dated December thirteenth, eighteen hundred and fifty-nine, forms of affidavits were prescribed to prove the character of the land, which were to be procured by the authorities of the State, and reported to the United States Surveyor-General.

The State authorities have taken great pains to obtain correct and reliable affidavits of the character of these lands at the date of the grant, and have run the segregation lines between them and the uplands in the greater portion of the State, and have filed original affidavits, proving the swampy character of all land embraced within the lines of the segregation, as run by their Surveyors, with the United States Surveyor-General at San Francisco, and requested that officer to report the same to the Department, in order that the land might at once be certified to the State by the General Government.

I inclose herewith the blank form of affidavit obtained by the State authorities for all lands claimed under this grant, so far as surveys have been made.

The Surveyor-General reports that in consequence of the very limited and reduced clerical force in his office he has not time to examine and report the affidavits and lands embraced therein to the Land Office at Washington.

The State Legislature, in eighteen hundred and fifty-five, passed an Act providing for the sale of the Swamp Lands, and from that time to this date has disposed of nearly seven hundred thousand acres

of these lands, and ever since the passage of the Act our enterprising citizens have been engaged in works of reclamation in various parts of the State, by constructions of levees and drains, and by stopping the mouths of sloughs, and other methods, rendering fit for cultivation considerable tracts of land which were before worthless marshes, and destroying thus all evidence of the original character of the land. They are still engaged in such works of reclamation, and I respectfully submit that the affidavits, which have been procured by the State authorities with so much care, time, and expense, are the best and most reliable evidence of the character of the lands at the date of the grant of eighteen hundred and fifty which it is possible to procure; and that they should be taken as conclusive evidence of the character of the land; and it is to be hoped that the United States Surveyor-General will be instructed to employ the services of one Clerk, whose entire duty it shall be to examine the segregation affidavits furnished by the State authorities, until the whole are examined and the Surveyor-General reports the same to the Department at Washington, to be certified to the State.

The whole object of the State is to have selections and sales confirmed, and to transfer the contest for title from the purchaser to the State, and if it shall finally appear that the State has disposed of lands to which she was not entitled, it is proposed to pay to the United States the same price per acre that would be paid if the lands had been sold to individuals.

The Congressional delegation from this State will be fully informed upon all the subjects relating to this important matter, and your co-operation with them for the purposes indicated in the resolutions (a certified copy of which is herewith submitted) is respectfully requested.

I have the honor to be, gentlemen,

Very respectfully,

Your obedient servant,

J. F. HOUGHTON,
Register of State Land Office.

Which communications, I regret to say, has never been answered by either the Secretary of the Interior or Commissioner of the Land Office.

The advantages that would arise from the passage of such an Act are obvious. The State would be able to give good titles in all cases, so that no purchaser need ever feel apprehensive of being disturbed by parties claiming to hold under another title. It would be for the advantage of the General Government also; for it is plain that she would receive more for the lands than if sold in her usual manner. I regard this as the most important and urgent question connected with the Public Lands of the State, and have therefore presented it first.

TITLES TO STATE LANDS.

Immediately after assuming the duties of this office in January, eighteen hundred and sixty-two, being aware that the State never had

received patents for any land embraced in the various grants from the General Government, I first made an examination of the steps which had been taken by the State to perfect the title to its Swamp and Overflowed Lands, and after consultation with Honorable E. F. Beale, United States Surveyor-General for California, learning that no evidence of the character of such lands, other than the segregation maps, had ever been furnished the Department, I immediately commenced the preparation of certified copies of all the original segregation affidavits which were on file in this office, and as early as June of the same year a larger portion of them were forwarded to him, and the balance as fast as they could be prepared.

Upon his representation to the Department that the above named certified copies were on file in his office, notice was received from the Commissioner that the original affidavits must be forwarded to Washington, in order that the Department might judge of their correctness.

On the thirtieth of January, eighteen hundred and sixty-three, I received from Colonel Beale the package of certified copies, which I still retain in this office, and on the same day I forwarded to him the original affidavits, which were by him forwarded, with the required lists, to the Department.

These original affidavits had been procured by the County Surveyors making the segregations, under instructions from the Board of Swamp Land Commissioners, whose duty it was, under the Act approved May thirteenth, eighteen hundred and sixty-one, creating said Board, to take general charge of the segregation and reclamation of all the Swamp and Overflowed Lands within the State, and to furnish the County Surveyors with blank affidavits of the form required by the Commissioner of the General Land Office.

During the year eighteen hundred and sixty-one, segregation surveys were made of nearly one million acres of such land, accompanied by affidavits as required by the Commissioner, except no affidavit was made when the Deputy United States Surveyor or his Assistants could not be found, stating that fact as a reason why the affidavits were made by other parties. The honorable Commissioner regards this last named affidavit as essential, and therefore returned the originals to United States Surveyor-General Beale, for this correction, who has forwarded them to this office.

I have notified the Board of Swamp Land Commissioners of the facts in the case, and they have promised to procure the required affidavits. When they are furnished me I shall renew my efforts to secure to the State, as speedily as the workings of the General Land Office will permit, patents for all the Swamp and Overflowed Lands which she is entitled to.

In regard to perfecting titles to the School, Seminary, and Public Building Lands, no other steps have been taken than those contained in the joint resolutions of April twenty-fourth, and the usual notice to the local United States Register of State selections, which last, in due time of the Land Office at Washington, is supposed to bring patents to all lands decided to be properly selected, and for all not so deeded we must look to Congressional aid, or the proper decision of our legal tribunals.

STATE LAND LAWS.

In the last Annual Report reference was made to the defective operation of the laws regulating the business of the State Land Office, and the duties of the county officers in connection with it, and several suggestions were made with a view to the inauguration of a better system.

On the twenty-seventh of April an Act was approved, which went into effect sixty days thereafter, and which has since that time strictly governed the business of the office, and generally been complied with by the county officers. A great general improvement has been observed, and it is believed that the simple order of business as now arranged will soon be understood and closely followed by all of them.

There are, however, some few particulars in which experience of the practical working of the law has shown that slight amendments may be advantageously made. The twentieth section of the Act prescribes the manner of giving notice to delinquent purchasers before commencing action for the annulment of certificates of purchase. This now requires that publication shall be made in some newspaper published in the county, or if there is no paper so published, by posting upon the door of the County Court House. This method is costly, and as there was no appropriation out of which the cost of publication could be paid, the requisite notices have not been given. The alternative is that the notice by posting should be made the only method, or that money should be set apart to defray the cost of carrying out the present plan. The former is preferred on the ground of efficiency as well as economy, and is strongly recommended.

The twenty-eighth section requires that all parties desiring to purchase land from the State shall take the oath of allegiance therein prescribed. The evident propriety of requiring this need hardly be alluded to; but the twenty-ninth section prescribes the manner of taking and transmitting, etc., and is open to many objections. It is cumbrous, attended with expense and trouble to purchasers, and so liable from its complexity to be misunderstood by the county officers that there has scarcely been an instance, up to the present time, in which it has not been necessary to return the papers, often more than once, before they could be obtained in the shape which the Act seems to require.

It is recommended that the twenty-ninth section be altogether repealed, and the twenty-eighth section amended so as to require merely that the oath of allegiance as therein prescribed, and properly authenticated, shall accompany all applications for State lands, and that no location or survey shall be approved by the Surveyor-General until such affidavit is filed in his office.

DISPOSITION OF THE PUBLIC DOMAIN.

The financial report of the General Land Office at Washington fully proves the fact that the Public Lands have ceased to be a source of revenue to the National Treasury.

For a long series of years past it has cost more to survey the Public Lands, and maintain the offices necessary for their sale, than the entire amount derived from such sales, and when we take into consideration

the donation by the last Congress of lands for the purpose of an Agricultural College for every State in the Union, and the large amount of bounty land warrants which will soon be issued to honorably discharged soldiers, all of which is subject to location, it is easy to see that this difficulty will increase, and that the revenue from this source will rapidly decrease. Already the appropriations for surveys have been reduced, in consequence of the small revenue derived, to such a degree that in our own State our population is far in advance of the surveys, for which they are exceedingly anxious in order that they may perfect their titles.

The facts above set forth have, for a long time past, engaged the serious attention of your present Surveyor-General, and I here desire to give the rough outline of a plan by which the Public Lands of the United States may become a source of revenue, and, at the same time, obviate the conflicts which have already arisen and will continue to arise from the fact that there are two sources of title to the Public Lands.

In our own State, as in nearly all States in which there are Public Lands, there is a State Surveyor-General, and in each county a County Surveyor, who is more or less under his direction, and in each Land District a State Locating Agent, also, a State Land Office, through which all the lands donated by Congress are disposed of.

If, instead of the present expensive manner of carrying out the system of public surveys and sales of Public Lands which has been adopted by the United States, the General Government would make each State the Agent for the management, survey, and sale of all the Public Lands within its limits, subject to such restrictions as Congress may see fit to impose, requiring the States to allow the selection of homesteads, the location of bounty land warrants, pre-emption rights, working of mineral lands, and all other privileges now allowed by law, limiting, if it pleases, the price at which it should be sold, and the amount to any one purchaser, requiring the State to pay into the Treasury of the United States a certain per centage of the sales of such lands—say ten per cent of the amount of the sales of such lands as have not already been surveyed by the United States, and say twenty per cent of sales of all such as have been so surveyed—the whole difficulty would be obviated. The Public Lands, instead of being a drain upon the National Treasury, would become a source of positive revenue. Conflicts which now arise between individuals deriving title from the two sources would be entirely obviated. The readiness with which all disputes or contests could be settled by reference to an officer close at hand, the readiness with which testimony could be obtained to decide such contests, would make justice much more certain and speedy, and titles which, under the present system, are often compelled to wait a generation for the public survey, and perhaps five years more for completion, would be ready in a few months under the excellent system adopted in the laws of our own State for the disposal of its Public Lands donated by Congress. The General Government would not relinquish its proprietorship, while every settler would be benefitted.

MINERAL LANDS.

It is difficult to determine what disposition should be made by Government of the mineral lands. That at some time in the future they should

be sold, seems to be the general opinion among those most conversant with the subject. But when, and how?

The lands containing lead ore reserved by the United States Government in Illinois, Wisconsin, and Iowa, were at different periods worked under three systems. The last was commonly known as the "leasing system," under which a greater or lesser amount of land was leased for one year to the miner. The lease could be renewed if desired, or cancelled if the lessee preferred to abandon the ground upon the failure of the prospect. The regular subdivisions of the public surveys were not adhered to when the main purpose of including a certain lead required a departure from them. In places where many veins were struck lying quite near together, the mining lots took every form, and nothing was required but that surveys carefully made should define the dividing lines. Every one who wished could obtain a lease, and the revenue was expected to arise from a certain percentage paid by each lessee out of the mineral taken from the ground. For a time there was some difficulty growing out of a question of the right of the Government to these lands, in view of the Act of eighteen hundred and thirty-four for their sale; but a decision of the Supreme Court of the United States having determined it, the system was carried on for more than two years, under as favorable circumstances as possible. The experiment of raising any revenue from mines may be said to have been fairly tried. There was no further opposition, and all seemed to be done in conformity with the law; but the amount collected was very small, and it was evident that some radical difficulty existed. The policy of the relation of landlord and tenant being kept up between our Government and its citizens was also much disputed, and when the Act of Congress directing the sale was passed, there were few who did not recognize the wisdom of so disposing of the whole subject. In the Summer of eighteen hundred and forty-seven the sales were completed. There was no difficulty experienced in adjusting the claims, notwithstanding their want of conformity to the lines of the public surveys. Neighborhood or township meetings were called, and individuals were appointed to buy the lands as offered at the public sale, and provision was made for the immediate conveyance by them of each lot to its claimant.

These facts are alluded to as suggestive, and because the question of the disposal of the mineral lands at the present time is attracting attention in official quarters. If it should become a question for Congressional action, the State should be prepared to indicate such a course as would best protect the interests of its large mining population. Should it be determined to dispose of these mineral lands, I am satisfied that, as in the case of other lands, it would be better that the State should act as the Agent of the General Government. Having a better knowledge of the wants and interests of the mining population than the authorities at Washington can have, her officers would be much more likely to adopt the best measures for the protection of those interests.

This new proposition for the disposal of the Public Lands will doubtless meet with opposition until the subject can be fully understood; but from the facility with which every argument that can be urged against it can be met and answered, I am satisfied that it will prevail over all opposition if it can be brought to enlightened discussion.

I would suggest that the importance of this subject be urged upon our Congressional delegation, for such action as will tend to bring about the desired result.

The amount of land which has become the property of the State under the various grants is as follows :

Description.	Acres.
Grant of sixteenth and thirty-sixth sections, about.....	6,755,000
Grant of Swamp Lands, about.....	1,500,000
Grant for Internal Improvements.....	500,000
Grant for a Seminary of Learning.....	46,080
Grant for Public Buildings.....	6,400
	8,807,480
Add Grant for an Agricultural College.....	125,000
Total	8,932,480

To this amount must be added the Tide Lands belonging to the State by virtue of her sovereignty, but their quantity cannot, for obvious reasons, be accurately known.

Up to the date of the present report, these lands have been disposed of as follows :

SCHOOL LANDS.

GRANT OF FIVE HUNDRED THOUSAND ACRES.

How sold.	Acres.
Sold under School Land Warrants prior to the passage of the Act of April 28, 1858.	237,760.00
Sold for cash since that time.....	261,197.83
Total.....	498,957.83

Leaving a balance of one thousand and forty-two and seventeen one-hundredths acres, which is reserved as a margin to correct errors in the final adjustment of the grant.

One re-location, of two hundred and ninety-two and thirty nine one-hundredths acres, has been made since the date of the last report, and patents have been issued for six thousand nine hundred and fourteen and three one-hundredths acres.

GRANT OF SIXTEENTH AND THIRTY-SIXTH SECTIONS.

Amount Located upon Sixteenth and Thirty-Six Sections Proper.

Districts.		Acres.
Stockton, surveyed.....	19,137.31	23,777.31
Stockton, unsurveyed.....	4,640.00	
Marysville, surveyed.....	18,238.77	21,355.77
Marysville, unsurveyed.....	3,117.00	
Humboldt, surveyed.....	3,630.46	4,870.46
Humboldt, unsurveyed.....	1,240.00	
San Francisco, surveyed.....	1,440.00	10,900.00
San Francisco, unsurveyed..	9,460.00	
Visalia, surveyed.....		2,950.68
Los Angeles, unsurveyed		200.00
Locations unapproved in above Districts.....		64,054.22
		7,305.84
Total located..		71,360.06

The amount of sales of these lands by the Boards of Supervisors, under the Act of April twenty-sixth, eighteen hundred and fifty-eight, so far as reported to this office, is eighteen thousand seven hundred and twenty acres.

LANDS TAKEN IN LIEU OF THE SIXTEENTH AND THIRTY-SIXTH SECTIONS RESERVED OR DISPOSED OF BY THE UNITED STATES.

Districts.		Acres.
Stockton, surveyed.....	19,140.00	52,799.31
Stockton, unsurveyed.....	32,732.92	
Stockton, contested.....	926.39	
Marysville, approved, surveyed.....	32,734.61	39,364.19
Marysville, approved, unsurveyed.....	3,608.50	
Marysville, unapproved, surveyed.....	1,900.00	
Marysville, unapproved, unsurveyed	1,121.08	
Humboldt, approved, surveyed.....	10,533.64	19,568.84
Humboldt, approved, unsurveyed.....	7,600.00	
Humboldt, unapproved, unsurveyed.....	320.00	
Humboldt, contested.....	1,115.20	

San Francisco, approved, surveyed.....	13,140.00	
San Francisco, approved, unsurveyed.....	159,180.00	
San Francisco, unapproved, surveyed.....	15,160.00	
San Francisco, unapproved, unsurveyed.....	14,440.00	
San Francisco, contested.....	7,167.86	
		209,087.86
Visalia, approved, surveyed.....		2,640.00
Los Angeles, approved, unsurveyed.....		4,468.40
Total.....		327,928.60
Add Sixteenth and Thirty-Sixth Sections proper.....		71,360.06
Total amount applied for under this grant.....		399,288.66

SEMINARY LANDS.

GRANT OF SEVENTY-TWO SECTIONS.

Location.	Acres.
Amount of grant.....	46,080.00
Total located at date of last Report	39,646 82
Located this year in Marysville District.....	2,560.00
Located this year in Stockton District.....	320.00
	42,526.82
Balance unsold	3,553.18

PUBLIC BUILDING LANDS.

GRANT OF TEN SECTIONS.

Location.	Acres.
Amount of grant.....	6,400.00
Total located at date of last Report.....	5,298.82
Located this year in Stockton District.....	320.00
	5,618.82
Balance unsold.....	781.18

STATE SCHOOL LAND WARRANTS

Located under the Act of April 23d, 1858.

Location.	Acres.
Located at date of last Report.....	17,612.00
Located this year in Marysville District..... 4,160.00	
Located this year in Stockton District..... 640.00	
	4,800.00
Total to date of this Report.....	22,412.00

STATE SCHOOL LAND WARRANTS

Located upon Unsurveyed Lands, under the Act of April 18th, 1859.

Location.	Acres.
Located at date of last Report.....	57,760.00
Located since date of last Report.....	3,840.00
Total to date of this Report.....	61,600.00

SWAMP LANDS.

Description.	Acres.
Sold by the State at date of last Report.....	654,743.00
Sold by the State since date of last Report.....	33,025.42
Total to date of this Report.....	687,768.42
Sold during the past year..... 33,025.42	
Applied for during the past year, but the surveys not yet approved..... 9,268.66	
Total taken up during the year.....	42,294.08

Of which amount ten thousand six hundred and eighty-five and twenty one-hundredths acres are embraced in re-surveys of forfeited lands.

TIDE LANDS.

Description.	Acres.
Total sold by the State to date of last report.....	2,768.32
Sold this year in Solano County..... 93.28	
Sold this year in Santa Barbara County..... 643.76	
Sold this year in San Francisco County..... 226.68	
	963.72
Total at date of this report	3,732.04

STATE LAND FUNDS.

The following tables show the amounts paid to the several County Treasurers as principal and interest upon purchases of the various classes of lands. They are made up from the books of the Controller, because they only show the condition of the available Fund. There is still, as there has always been, a wide difference between these amounts and those shown to have been paid by purchasers according to the books of the State Land Office. This is due, in part, to the defalcation of some of the County Treasurers, and in part to the confusion of the various Funds by those officers, who, under the operation of the old Act, which offered no means for correcting the error, often credited one Fund with moneys belonging to another. This practice continued, of course, until the present law went into effect, on the twenty-seventh of June last. Since that time there can have been no error of this sort, for no mistake can occur that will not be detected in the Land Office, where the apportionment is certified before the Fund is credited.

It would require the services of a competent Clerk for many months to make up from the original returns to the Controller, after correcting them by the books of the Land Office, a full statement showing the true condition of each Fund, but it would well repay the cost of its preparation. If permitted to expend for extra clerical services, as formerly was the case, the fees received for certificates of purchase and patents, the Register could, perhaps, in the next annual report present this correct statement. If it is as important as I conceive it to be that the Funds belonging to the Schools, Seminary, and Public Buildings, should be rightly apportioned, I would respectfully suggest that the above recommendation be acted upon.

SCHOOL LANDS.

To date of last report—principal.....	\$127,487 92	
Since date of last report—principal.....	35,511 05	
Total to date		\$162,998 97
To date of last report—interest.....	\$124,712 81	
Since date of last report—interest.....	39,012 48	
Total to date.....		163,725 29

SEMINARY LANDS.

To date of last report.....	\$6,534 97	
Since date of last report.....	2,465 93	
Total to date.....		\$9,000 90

PUBLIC BUILDING LANDS.

To date of last report.....	\$679 56	
Since date of last report.....	80 00	
Total to date		\$759 56

SWAMP AND OVERFLOWED AND TIDE LANDS.

To date of last report.....	\$312,536 57	
Since date of last report.....	19,822 64	
Total to date		\$332,359 21

S T A T E M E N T

Of the expenditure of all Appropriations, (other than Salaries,) for the Offices of the Surveyor-General and Register of State Land Office, from the date of the last Report to the 1st of December, 1863.

For What Purpose Expended.	Amounts.
Office Rent.....	\$605 00
Postage and Expressage.....	364 35
Porters of both offices, including arrears.....	413 34
Binding Books, and Contingent.....	67 25
Purchase of Maps and Plats.....	55 00
Seal for Surveyor-General.....	30 00
Safe for office.....	400 00
Total.....	\$1,934 94

J. F. HOUGHTON,
Surveyor-General and Register.

Sworn to and subscribed, before me, this thirtieth day of November, eighteen hundred and sixty-three.

[SEAL.] SAMUEL CROSS,
Notary Public, Sacramento County, Cal.

The last part of the Surveyor-General's report consists of the statistical tables. It has very properly been made his duty to compile them. The value of such tables, when accurate, is universally acknowledged, and it is believed that every State has taken care to secure the collection and compilation of information of the most reliable character for its statistical reports. The authority attaching to tables so officially presented renders it imperative to neglect nothing that will tend to make them entirely trustworthy.

In March of each year the blanks to be used in collecting the information, and that for reporting them in a condensed form to the Surveyor-General, are distributed to the County Assessors, and in cases where the county has been divided into districts, the blanks have been sent to the Recorder for distribution, as the condensed report is made by him.

An examination of the previous tables, as well as the present, will show that there is a defect in the system, and that the end sought is not attained. There are no means of securing correct returns, or perhaps any returns from the County Assessors. A few of these officers seem to appreciate the importance of these returns, and the sheets bear evidence of careful and intelligent labor; but very many evidently regard their preparation as a useless task, unnecessarily imposed, and appear to think that a few figures, seemingly set down almost at random, will suffice

never reflecting what effect these careless, imperfect statements may have upon a report which is to be the source of all the knowledge we can have of the condition of the State.

When a return is incorrect or imperfect, its effect is to depreciate the county from which it comes. When any of those multitudes so constantly pouring into the State desire to select their place of abode, will they choose that county whose average yield per acre seems so very small, whose large fruit crop is valueless, whose vines are barren, or whose cattle give back nothing to the dairyman? Let it not be supposed that these people know nothing of and care nothing for statistics. Many of them do both understand and appreciate these sources of information, and have been used to consult them; and when they have not done so directly, they have obtained advice based upon them. It should be remembered that these tables are compiled and published under authority of the State, and form part of its records; that as a part of the Appendix to the Journal of the Senate they go to other States and find place in their Libraries, that there, as the sole accessible and presumed reliable authorities, they may be consulted and form the basis of published articles, which, widely circulated, may influence many minds.

Much labor is necessary in the preparation of these tables, and it is with regret that I add that I cannot commend them to public confidence. I have endeavored to amend evident errors, or supplied omissions; have stated average values when fuller statements from neighboring counties have given me the means of making them without great probable variation from the truth. Without this labor, the tables would be absolutely worthless; with it, they are only imperfect approximations; and surely, this is not what the law and the interests of the State demand. The only remedy I have to propose is the passage of an Act making the necessary appropriation and authorizing the payment of a premium to each County Assessor who shall present a full report at the required time.

REPORT OF THE SURVEYOR-GENERAL

UPON THE

Progress of the Eastern Boundary Survey,

TO NOVEMBER 20, 1863.

COMMUNICATION.

SURVEYOR-GENERAL'S OFFICE,
Sacramento, November 20th, 1863. }

To His Excellency,
LELAND STANFORD,
Governor of California :

SIR :—In compliance with the provisions of an Act entitled an Act to provide for surveying and establishing the Eastern Boundary of the State of California, approved April twenty-seventh, eighteen hundred and sixty-three, I have the honor to submit through you to the Legislature of the State the following report of the progress of the work.

I am, very respectfully,

Your obedient servant,

J. F. HOUGHTON,
Surveyor-General.

REPORT.

EASTERN BOUNDARY SURVEY.

By an Act of the Legislature, approved April twenty-seventh, eighteen hundred and sixty-three, it was made the duty of the Surveyor-General of the State to define and establish the entire Eastern Boundary Line of the State, by running, measuring, and marking a transit line between the point of intersection of the thirty-ninth parallel of north latitude, with the one hundred and twentieth degree of longitude west from Greenwich, near Lake Tahoe, (formerly Lake Bigler,) and the point where the thirty-fifth parallel of north latitude crosses the Colorado River, as the said points were established by Lieutenant Ives, Chief Astronomer of the United States Boundary Commission, appointed for that purpose, and by running and marking in the same manner all that part of said boundary lying between the first named point near Lake Tahoe and due north from said point to the southern boundary of Oregon.

The same Act also provided that the Governor should forward a copy of this Act to the Governor of Nevada Territory, with a request that he should appoint some suitable person or persons to act in conjunction with the Surveyor-General in defining and establishing said boundary.

In compliance with the request so made, his excellency Orion Clemens, then Acting-Governor of the Territory, appointed as such Commissioner Butler Ives, Esq., a gentleman whose mathematical education and large experience as a United States Surveyor peculiarly fitted him for the position.

It will be observed, that the small appropriation made for this survey—twenty-five thousand dollars, to run a boundary line six hundred and thirteen miles long, over a rugged, mountainous country, through several tribes of Indians not known to be friendly, and, indeed, on both the northern and southern portions of the line committing frequent depredations and murders whenever opportunity presented, passing through dense forests, over almost unexplored and uninhabited deserts, with intervals of thirty, fifty, and eighty miles without water, requiring a large train of animals to pack this indispensable requisite to existence—could not have contemplated anything more than the Act expressed, simply “running and marking the boundary line” in the most expeditious and economical manner compatible with accuracy. It would have been extremely gratifying to me, could I have felt justified in procuring the

services of a first-class Geologist, a Botanist, and a Naturalist, to examine and report upon the features relating to their respective professions of the country over which we passed, and I cannot but think that the State would have been richly repaid for the additional expenditure, had the Legislature authorized the employment of such services.

While the bill was pending, this matter was suggested to its friends by me, but at that time danger of a conflict of arms between the State and Territorial authorities, growing out of the question of jurisdiction of the Courts in Plumas and Mono Counties, was imminent, and they were fearful, if an appropriation was asked sufficient to make a survey of that class the bill would be defeated, and it was left at the sum named.

With the funds thus provided, on the first of May, four days after the approval of the Act, I engaged the services of Mr. John F. Kidder, an Engineer and Surveyor of large experience, to assist in organizing and equipping a party to commence the work, ordering them to report for duty at Lake Tahoe, on the twentieth of May, or as near as possible to that date; and on the twenty-second of that month Mr. Kidder and party reported to me at the lake, and the work was commenced and continued without interruption to the Oregon line.

For the full particulars of the progress of the work, I refer you to the report of Mr. Kidder, Engineer in charge of party, and to the general notes of the country through which we passed, both of which are herewith submitted.

Immediately upon the passage of the Act above referred to, appreciating the importance of having the position of the initial point at Lake Tahoe definitely determined as a starting point, and anxious to avoid the delay and expense of establishing an observatory to determine longitude, I took the latitude and longitude of Lieutenant Ives' observatory, at the south end of Lake Tahoe, as determined by himself, making, myself, test observations for latitude, which agreed to seconds with those made by him. As no report has been published of his field work and computations, and as some doubt has been expressed as to whether Lieutenant Ives ever reduced his observations so as to determine the initial points at the lake and on the Colorado, I will here furnish the evidence I have been able to obtain, that they were so determined by himself.

While the bill providing for the survey was pending before the Legislature, through the courtesy of United States Surveyor-General E. F. Beale, Esq., the entire field notes, topographical maps, etc., connected with the observations of Lieutenant Ives, which were in his possession, were delivered to me for examination.

I found the notes of a long series of observations at his observatory near Lake Tahoe, extending over some months of time, with the latitude of the observatory, taken by sextant and sidereal clock, computed and carried out as North Latitude $38^{\circ} 56' 47'' 52$.

Observations were made by myself, and the latitude computed, which differed only in seconds from that of Lieutenant Ives, and his results were used in the survey as correct.

A careful search for reduction of his observations for longitude resulted, as I had anticipated from what I knew of the circumstances under which the computation was made, in a failure to find them among his notes. In this apparent dilemma I applied to Mr. John F. Kidder, formerly Chief Clerk in the United States Surveyor-General's Office for Nevada Territory, to which office Lieutenant Ives furnished the longi-

tude of the observatory before mentioned, under the following circumstances :

By an Act of the Territorial Legislature, approved November, eighteen hundred and sixty-one, the Governor was authorized to have the boundary line run from Lake Tahoe to below Esmeralda—the object being to determine the position of Aurora with reference to the boundary line.

In order to establish the initial point at Lake Tahoe, which was necessary before the work could proceed, Mr. Kidder placed himself in communication with Lieutenant Ives, then at work at his observatory in Lake Valley, who, in his answer, dated August twenty-eighth, eighteen hundred and sixty-one, says : “ I trust our observations this week will give us our longitude with reference to San Francisco ; ” and fourteen days later he telegraphs from San Francisco, September eleventh, eighteen hundred and sixty-one, to Mr. Kidder, as follows : “ Approximate longitude of station is seven hours, fifty nine minutes and fifty-three seconds west of Greenwich ; ” all of which correspondence and telegrams are in my possession, on file in this office.

This result, reduced to distance, makes his observatory—the precise position of which is plainly marked by monuments still remaining—in longitude $119^{\circ} 58' 15''$ west from Greenwich, or $0^{\circ} 1' 45''$ east of the one hundred and twentieth meridian.

The initial point on the Colorado River is, by the Act of Congress admitting the State of California into the Union, where the thirty-fifth parallel crosses the Colorado, which is marked in three different places upon the topographical field books and maps accompanying Lieutenant Ives' survey, as $114^{\circ} 36'$ west from Greenwich, at which place a monument was placed, distant about two miles from Fort Mojave.

The geographical position of the initial points thus determined, it became necessary to calculate the azimuth of a transit line or arc of a great circle connecting the two points. In order to secure a great degree of accuracy in this important part of the work, upon which depended the accuracy of the whole line, I submitted the problem of computing the azimuths of the line at every degree of latitude, also the distance on the line between parallels, to Professor J. E. Hilgard, in charge of the United States Coast Survey Office at Washington, and before the completion of that portion of the line between the lake and Oregon, I received from him a very satisfactory computation, the principal results of which are as follows :

DISTANCES BETWEEN PARALLELS.

35° and 36°.....	159,827 metres, or 174,782 yards.
36° and 37°.....	162,096 metres, or 177,263 yards.
37° and 38°.....	164,617 metres, or 180,020 yards.
38° and 39°.....	167,431 metres, or 183,098 yards.

Total length of line south 715,163 yards.

Or, four hundred and six miles and six hundred and three yards.

AZIMUTHS OF THE SOUTH LINE.

At 35°.....	134° 19' 26"
At 36°.....	133° 35' 15"
At 37°.....	132° 4' 10"
At 38°.....	131° 57' 56"
At 39°.....	131° 04' 15"

The azimuth is reckoned from the south by west.

I am under many obligations to Professor Hilgard for his promptness in forwarding these computations. Commissioner Ives and myself made the same computations by use of Lee's Formula, and were gratified to find our work verified on receipt of those of Mr. Hilgard, differing not materially from his computations, which were used in starting the line.

The latitude, longitude, and locality of Lieutenant Ives' Observatory being known, it was readily apparent that the initial point, at the intersection of the thirty-ninth degree of north latitude with the one hundred and twentieth meridian, fell within the lake about three and two thirds miles from the southern shore, being three miles twelve hundred and eleven yards north of the observatory.

It being impossible to set an instrument at the initial point, and the azimuth of the line being changeable with every advance, it became necessary to find another point upon the line upon which to establish our observatory, and set our altitude and azimuth instrument for establishing by observation the true meridian, and from which to compute the new azimuth and turn off the angle of the line.

For this purpose, by means of spherical trigonometry, the length of a line which should pass from the one hundred and twentieth meridian through the observatory point to the diagonal line was computed, together with the required azimuth, and at this point fifty-eight chains in a south-easterly direction from monument on the Kingsbury & McDonald road through Lake Valley, near Lapham's Station, the new observatory was established by setting firmly in the earth a large pine log, and mounting thereon our altitude and azimuth instrument, manufactured by Parkinson & Frodsham, of London, with twelve-inch horizontal circle reading to ten seconds, and sixteen-inch vertical circle reading to five seconds. Telescope, four feet focal length.

With this instrument observations were made every favorable night for nearly two weeks, the meridian correctly established, and the angle of the line, bearing at this point south 48° 52' 45" 26 east, was laid off, and the line started for the Colorado. In order to secure a great degree of accuracy in running the southern portion of the line, which is one of the longest transit lines ever attempted to be run in the world—being from the initial point in the lake to that on the Colorado River, four hundred and six miles six hundred and three yards—it was necessary to procure a very superior instrument; and after examining such as could be found in the State, I determined to send to New York for a straight line transit, made by Temple, of Boston, for R. E. Ricker, Esq., an eminent New York and Western Railroad Engineer, for the express purpose of running long straight lines with greater accuracy than is possible with ordinary instruments, there being but very few such in the United States.

A short time before the completion of that portion of the line lying north of the lake, this instrument, in itself a model of superior workmanship, and the only thing of the kind in the State, was delivered in good order at Sacramento, at a total cost of three hundred and fifty dollars. The southern portion of the line, so far as run, has been run with this instrument, with positive instructions, which have in no case been departed from, to reverse the instrument and double centre for every foresight, to insure against the possibility of error in running an absolute straight line. Leaving the lake at its most south-easterly part, a trifle to the south and west of Lapham's Station, it crosses the Kingsbury & McDonald road through Lake Valley at a distance of about half a mile southerly from the station, and almost immediately commences the ascent of the high granite range dividing Lake and Carson Valleys, being the eastern summit of the Sierras.

The line crosses these mountains obliquely, crossing numerous deep ravines, perpendicular granite precipices, and barren peaks, rendering progress very slow and difficult. It leaves Job's Peak and Bald Mountain, the highest peaks in the immediate vicinity, within the State, emerges from the mountains into the Valley of the West Carson, about a quarter of a mile west of Carey's Mill, passes on about two hundred and fifty yards north-east of Captain Smith's house, and soon after crosses the West Fork of the Carson River; thence over high hills to the East Fork of the Carson, crossing it about one mile above or south-west of Young's Bridge; thence over a mountainous country to the West Fork of Walker's River, which it crosses some six miles above or south-west of the house of Mr. Rissua, and a little more than a mile above Raymond's house; thence over the Walker River Mountains, sometimes called the Three Sisters, across the Valley of the Sweetwater, upon its western border; thence to the East Fork of Walker's River, crossing it about four miles above Marsh's Station, where the Aurora Road crosses the river; thence over high mountains to Rough Creek, crossing it some three hundred yards below where the road from Aurora to the Big Meadows of the Walker's River crosses the same stream; thence on to Mount Braly, crossing it three miles twenty-seven chains and twenty-one one-hundredths south-west of the flagstaff in the Town of Aurora. At this point, having been constantly with the party from the time of leaving the lake, and having determined the most important question in connection with the position of the line, viz: the location of the Town of Aurora, I left for Sacramento to make up the Annual Report of the Surveyor-General, to report progress of the Boundary Survey, and attend to other business of the office accumulated during my absence. I gave directions to Mr. Kidder to connect the Survey with the United States Surveys in that vicinity, Mono Lake, Big Meadows, Bodie Mines, and other places of importance, while awaiting the arrival of supplies ordered from Sacramento, and to increase his party to twenty men, preparatory to entering upon the country below Aurora, inhabited by bands of Pi Ute and Owen's River Indians, one of the most numerous and hostile of which is commanded by that most desperate and treacherous of all Indians, Captain Joaquin Jim, and to push the work on as fast as accuracy would permit, in order to cross the White Mountains before the Winter's snows set in, which, if encountered before crossing, I feared would compel a suspension of operations for the season.

Once across them, and upon the desert beyond, I anticipated that the work might proceed more favorably in the Winter than in the Summer season, when, for very long distances, we could expect to find little or no

water, which deficiency I expected the snows and rains of Winter to supply.

Leaving Mount Braly, near Aurora, the line passes over low, rolling hills, destitute of water for a distance of nearly thirty miles, without a spear of grass for our animals, supporting no vegetation except sage brush, piñon, and juniper, passing the Adobe Meadows, leaving them a few miles to the right of the line.

Up to this point the line had, from the commencement, progressed rapidly and without any serious interruption, but here the party encountered some five hundred Indians, of both sexes and all ages, numbering from two hundred to two hundred and fifty warriors, under command of the notorious Captain Joaquin Jim, before named, and another called Captain Tom. The Indians were collected about four miles east of the eastern portion of the Adobe Meadows, for their annual feast and pine nut dances, and our line ran directly through their camp.

It was thought best, before running the line through their country, to hold a council with the Chiefs, and endeavor to make a treaty with them, or, at least, to explain to them the objects of the expedition, and learn how they were disposed towards us.

For this purpose, a few presents were made to the Chiefs, and long talks were had, which was interpreted by one of their own number, who spoke English, and, notwithstanding the assurances of the interpreter that all was right, indications were directly to the contrary, and a system of annoyances was kept up by them, showing that it was all wrong and anything but agreeable to them.

They would keep one hundred or more warriors, with one of their Chiefs, in our camp all the time, insisting upon being fed, while the other Chief would accompany the party on the line with another body of warriors, objecting to our party taking arms on the line, and at night, would demand pay for their services as an escort.

In order to avoid these annoyances, knowing that when the feast and dances were over the Indians would disperse into small bands and scatter over the country from Walker Lake to the lower portion of the Owen's River Valley, and knowing also, that this would not occur so long as our party was in the vicinity, it was decided to move back to Aurora, and await their dispersal. Accordingly, the party packed up their equipments and the remnant of their provisions, and started for Aurora.

On the night of the twenty-ninth of October, while camped between the Adobe Meadows and Aurora, they encountered a violent snow-storm, accompanied by terrific wind and severe cold, continuing for thirty-six hours, which resulted in eight of the party being more or less frozen in feet, fingers and ears—one of them our Mexican cargador, so badly frozen in both feet that for a time surgeons at Aurora thought amputation of some portions would be necessary. By careful attention he has recovered without requiring such an operation, but yet remains in a feeble condition.

In consequence of this storm, which had rendered the White Mountains, only about twelve miles beyond where the work stopped, impassable, it was determined to abandon the survey for the season and take the train to Sacramento, to await the action of the Legislature and the return of Spring before resuming operations. All that portion of the party not required for making maps, writing up field work, and attending to the train, were dismissed at Aurora and Carson City, and the train came on to Sacramento, arriving on the thirteenth of November. Anticipating the possibility of being compelled to abandon the work by the setting in

of Winter before the crossing of the White Mountains could be accomplished, I gave particular instructions to mark the exact centre of the line at every foresight after leaving Mount Braly, that it might be easily found whenever the work should be resumed, which has been done in such a manner that any of the party present can at once go to the spot and find the centre of both foresight and backsight to get the precise direction of the line.

It now remains for the Legislature to decide whether the work shall be resumed with the opening of Spring.

The location of the line cannot be absolutely correct until it is continued to the Colorado and corrected on the return, but so much care has been taken to have both the computations and the work of running the line approach absolute correctness, that it is confidently expected to strike the Colorado within from one to two miles of the initial point, and allowing the greater error, the correction at Aurora would be less than half a mile, while the line is three and one third miles distant as now run, consequently, no possible correction could change its position with reference to the line.

The country through which the line runs, and which could be affected by any change required, with the exception of a few acres on the West Carson, and near the river bottoms crossed, is barren sage brush desert, volcanic rocks, or high mountains, valuable only for the precious metals they may contain, and no mines were being worked which could be affected by any possible change.

The country beyond where the work was suspended, from the best information we can derive, is desert and barren mountains, for very long distances destitute of water, and for a considerable distance infested by Indians, which would require an escort for at least fifty miles at starting, and if the intervals without water exceed thirty miles, as we are informed they will, a train of camels will be required, in addition to the present train of mules, to pack water, as a train of mules could pack no more water than they would themselves require for a greater distance, while camels will endure for three days without water, and carry about three times the load of a mule. The uncertainty of the nature of the country, particularly with reference to water, renders it very difficult to form any correct estimate of the additional appropriation required to complete the work.

The original appropriation for the survey was twenty-five thousand dollars, of which there remained unexpended on the twentieth of November, as is shown by the annexed statement of expenditures, the sum of three thousand two hundred and seventy-eight dollars and one cent, and there remained on hand, of equipment and supplies, the value of four thousand four hundred and eighty-seven dollars, making a total of seven thousand seven hundred and sixty-five dollars and one cent, leaving as chargeable for actual cost of survey up to November twentieth, seventeen thousand two hundred and thirty-four dollars and ninety-nine cents—to which must be added the cost of making maps in triplicate, as required by the Act, the cost of replacing some of the monuments with cut stone, for which we could not delay the party while running the line, and small incidental items, which will increase this amount to about twenty thousand dollars. For this sum a trifle over half of the line, or three hundred and nine miles, has been run, embracing all that portion which is at all important to the State.

Under favorable circumstances, I am of opinion that a further appropriation of twenty thousand dollars would complete the line to the Colorado, make the corrections required on the return, erect more substantial monuments at points where most required, and prepare the necessary maps. It will be necessary for the Legislature, at the approaching session, to take some action upon this subject.

For a more definite and minute description of the country through which the line passes, you are referred to the descriptive notes and to the report of the Engineer in charge, both of which are herewith submitted. The location and description of the most important monuments on the line will be found under the appropriate head.

Barometric observations have been made at all points of interest from the lake to the point where the work was suspended on the southern line; but the short time allowed for making up this report after the arrival of the party, has prevented their reduction and publication at this time. They will be reduced and published in the final report of the Survey.

Similar observations were commenced upon the line north of the lake, but our only remaining barometer being broken during a violent gale of wind, which threw the tent in which it was hanging to the ground, they were necessarily suspended in consequence. Triangulations for distances were also made to all prominent points near the line, which, for want of time to compute them, cannot be given in this report.

In concluding this report, I desire to add my testimony to that furnished by the work they have accomplished to each and every member of the party, for the faithful and efficient discharge of every duty which has been assigned to them, and I think it is not too much to say that a better or more effective party for the duty required could not be found.

EXPENSES OF SURVEY. •

For what Purpose Expended.	Amounts.
Labor account for May	\$688 89
Labor account for June.....	1,274 00
Labor account for July	1,740 50
Labor account for August.....	1,233 32
Labor account for September	1,450 00
Labor account for October.....	1,750 00
Labor account, November 1st to 20th.....	747 15
Total account for labor to November 20th.....	\$8,884 02
Surveyor-General's salary.....	2,000 00
Incidental.....	2,339 73
Subsistence and transportation.....	3,013 84
Equipment.....	5,484 40
Total to November 20th, 1863.....	\$21,721 99
Deduct Equipment and Supplies on hand.....	4,487 00
Amount properly chargeable to Survey.....	\$17,234 99

INVENTORY OF EQUIPMENT AND SUPPLIES ON HAND NOVEMBER 20, 1863.

Description.	Value.
One Tangent Transit Instrument.....	\$350 00
One Sextant and Artificial Horizon.....	75 00
One Standard Ramrod Chain.....	15 00
Two Surveying Chains.....	12 00
One set Steel Tally Pins	10 00
Three Opera Glasses.....	75 00
One Aneroid Barometer	20 00
Nineteen pairs extra Woolen Blankets	150 00
Two Tents and fixtures.....	30 00
One Sharp's Carbine and accoutrements.....	50 00
One Shot Gun.....	50 00
One Chest Medicines	10 00
Provisions and Groceries.....	20 00
Camp Furniture.....	15 00
Three Horses and twenty-five Mules, (Pack-Train and equipments)	3,400 00
Four Saddles and Bridles, (other than with train).....	60 00
Five Pistols, with accoutrements.....	125 00
One Robe	15 00
Line Rods and Plummets.....	5 00
Total.....	\$4,487 00

EXPENDITURE OF FIVE THOUSAND DOLLARS

Placed in the hands of the Surveyor-General by the Act authorizing Boundary Survey.

For what Purpose Expended.	Amounts.
James M. Brown, expenses of train, Lake Bigler to Robinson's	\$37 00
Kingsbury & Co., provisions, mule shoeing, and ranching..	71 29
Lewis Eland, escort	60 00
W. Pharo, saddle.....	25 00
James M. Brown, expenses to Susanville.....	25 50
John Robinson, beef and milk	24 59
Sundry persons, incidental.....	94 75
James Phillips, blacksmithing.....	11 00
James Phillips, services self and five men.....	666 00
Carried forward.....	\$1,015 13

For what Purpose Expended.	Amounts.
Brought forward.....	\$1,015 13
J. F. Kidder, incidental.....	118 00
Lawrence & Houseworth, repairs Solar Compass	8 00
L. B. Richardson & Co., leather and canvas for train	57 00
L. E. Crane, expenses to Susanville, and with train.....	57 75
John F. Kidder, freight.....	75 00
Axsen & Jewell, provisions.....	16 31
H. D. Torreyson, mule shoeing.....	22 00
H. D. Torreyson, camp furniture	21 50
Millard & Bussard, hay and barley	17 16
Kelly, Mott & Co., camp furniture	49 90
J. F. Kidder, surveying instruments and expenses of pack train	80 00
Whitney & Co., freight.....	9 50
Thomas Hooper, services.....	17 50
Charles C. Rodgers, services.....	17 50
Quanchi & Lossa, provisions.....	5 75
R. C. Clements, provisions.....	3 50
Small & Burke, provisions.....	3 12½
J. F. Kidder, travelling expenses.....	114 50
A. F. Rice, supplies	47 75
A. Wright, supplies.....	5 00
J. F. Kidder, chains and camp furniture.....	52 00
Torreyson & Smith, blacksmithing.....	4 00
George M. Fall, freight.....	16 52½
T. F. Flynn, horse	41 50
P. F. Powers, provisions.....	7 80
J. P. Pulsifer, use of sail boat.....	15 00
A. H. Pray, ranching.....	20 00
L. S. Story, horse	275 00
John F. Kidder, provisions and supplies.....	92 56
J. M. Luther, ranching	28 59
L. E. Crane, supplies and expenses of pack train.....	121 44
Rhenis & Mitchell, medical attendance	42 50
L. E. Crane, provisions.....	36 00
John F. Kidder, stage fare, supplies, etc.....	263 95
Robison & Pearson, stabling mules.....	85 00
J. F. Kidder, supplies, Indian presents, etc.....	255 15
J. F. Kidder, freight, provisions, supplies, etc.....	212 67
J. S. Lawson, expenses of pack train, stage fare, etc.....	257 46
J. F. Houghton, incidental.....	211 78
Total.....	\$3,800 80
Appropriation.....	5,000 00
Balance unexpended to date	\$1,199 20

PARTY, AS ORGANIZED FOR NORTHERN TRIP.

Name.	Position.
J. F. Houghton.....	Surveyor-General.....
Butler Ives.....	Commissioner from Nevada Territory.
John F. Kidder.....	Engineer in charge of Party.....
James S. Lawson.....	Compassman.....
L. E. Crane.....	Clerk.....
M. G. King.....	Topographer and Barometrician.....
Amos Bowman.....	Chainman.....
George M. Fall.....	Chainman.....
J. B. Guilford.....	Axeman.....
Andy Wright.....	Cook.....
Thomas Flynn.....	Mayor Domo.....
James Brown.....	Packer.....
Bernado Guirsa.....	Arriero.....
Domingo Bevanco.....	Arriero.....

To which was added at Honey Lake, after the departure of Messrs. King and Guilford:

James Phillips.....	Blacksmith.....
Henry Arnold.....	Assistant on line, and Escort.....
Alexander Arnold.....	Assistant on line, and Escort.....
Joseph Hale.....	Assistant on line, and Escort.....
James Nichols.....	Assistant on line, and Escort.....
Joseph Belknap.....	Assistant on line, and Escort.....
Lewis Eland.....	Escort.....
— Willie.....	Escort.....
— Shute.....	Escort.....
— Winters.....	Escort.....

PARTY, AS ORGANIZED FOR SOUTHERN TRIP.

Name.	Position.
J. F. Houghton.....	Surveyor-General.....
Butler Ives.....	Commissioner from Nevada Territory.
John F. Kidder.....	Engineer in charge of party.....
James S. Lawson.....	Compassman and Topographer.....
L. E. Crane.....	Clerk.....
Amos Bowman.....	Barometrician.....
James M. Brown.....	Forward Rodman.....
Henry Goddard.....	Back Rodman.....
Eugene Sharon.....	Chainman.....
F. A. Hymers.....	Chainman.....
Hamilton Marton.....	Axeman.....
Phillip Diehl.....	Axeman.....

Name.	Position.
Henry Gaver.....	Cook.....
Bernado Guirsa.....	Cargador.....
Domingo Bevanco.....	Arriero.....
Vicente Sanchez.....	Arriero.....
Louis Pana.....	Arriero.....

To which was added at Aurora:

Frederick Durant.....	Assistant Rodman
Edward Clark... ..	Assistant Rodman.....
James McCully.....	Axeman.....
B. F. McCreedy.....	Axeman... ..
David Howard.....	Axeman.....

REPORT OF ENGINEER IN CHARGE OF PARTY.

REPORT.

Hon. J. F. HOUGHTON, Surveyor-General
of the State of California, Sacramento :

SIR:—I have the honor to submit the following report of the survey of the Eastern Boundary of the State of California, from the initial point at Lake Bigler, northerly, to the forty-second parallel of latitude, which parallel constitutes the boundary line between California and Oregon.

On or about the first of May, eighteen hundred and sixty-three, I was instructed by you to organize a party and to purchase equipments necessary for said survey, and on the twenty-second of the same month I reported to you at Lake Bigler as in readiness to commence observations necessary to verify the initial point at head of Lake Bigler, as established by Lieutenant J. C. Ives, formerly Topographical Engineer, United States Army.

For the purpose of making said observations, a large altitude and azimuth instrument had been provided by you, and the full notes of Lieutenant Ives' observations obtained from Honorable E. F. Beale, United States Surveyor-General of California. My party at this time was organized as follows, viz :

John F. Kidder.....	Engineer in Charge.
James S. Lawson.....	Transit Man.
M. G. King	Topographer and Barometrician.
L. E. Crane.....	Clerk.

Together with eight other persons, employed as chainmen, axemen, packers, etc. I had by your direction purchased a pack train of twenty-five animals.

The observations at Lake Bigler were made under your immediate supervision, and were witnessed by the Commissioner from Nevada Territory, Butler Ives, Esq., and were found to coincide with those taken by Lieutenant Ives, making the longitude of the observatory $119^{\circ} 58' 15''$ west from Greenwich, and the latitude $38^{\circ} 56' 47'' 52$ north. The next

step was to measure the distance west from the observatory to the one hundred and twentieth meridian, which was carefully done, but the point not falling in a favorable position to extend the line northwardly across Lake Bigler, it was deemed best to extend the line from the observatory to the north shore of the lake, and there offset to the one hundred and twentieth meridian. This was accomplished in the following manner: I sent Mr. Lawson, with two men, to the north end of the lake, having previously ascertained, approximately, the location of the line at that point, and directed him to show signal fires for two successive nights, moving the same (as he should be directed by means of signal fires on the right or left of the observatory) in a corresponding direction. On the night of June first, the signal fire of Mr. Lawson at the foot of the lake was plainly visible from the observatory, and was apparently not more than fifty feet from the line required. A signal was made him, which was immediately answered, but from a misunderstanding of the signals the observations of that night were declared to be a failure. On the next evening you personally directed the observations, the signals were promptly made, as promptly answered, and the meridian of the observatory extended across the lake, the length of which at this point we ascertained, both by triangulation and latitude, to be about twenty and one half miles.

On the following day I proceeded with my party, accompanied by yourself and Mr. Ives, to the foot of the lake, arriving at Mr. Lawson's camp on the evening of the fourth of June, having camped on the third near Captain Pray's sawmill, where I separated my pack train, sending a portion with two men to Robinson's, in Long Valley, via Carson, the rest accompanying me.

On June fifth, measured line from offset to the one hundred and twenty-fifth meridian—one mile, forty-two chains, and sixteen links. I had the misfortune to-day to lose one of the best pack mules, which fell over a precipice, breaking its back. In my opinion, neither of my packers were to blame in the matter.

We moved camp three miles further west, locating it near a beautiful bay, named by yourself Agate Bay. The following day was spent in meandering the shores, in order to obtain information necessary for the maps; observations were likewise made with the sextant by yourself, to ascertain the latitude, which was found to correspond with the distance obtained by triangulation.

June sixth, the line was fairly commenced from Lake Bigler north. After accompanying us some three miles, you returned to Sacramento, leaving explicit directions with me to spare no pains both as to the accuracy of the work, and economy and expedition in its prosecution, so far as was compatible with accuracy.

From the lake to the River Truckee, a distance of about fourteen miles, the surface of the country is rugged in the extreme, having heretofore been considered almost impracticable for men, and quite so for pack animals; we, however, experienced no further difficulty than in being compelled to build more than a mile of trail for our mules, and occasionally a pack animal or two would fall over the precipice, scattering cargoes in every direction, but fortunately being rescued without serious damage.

This portion of the country is covered with a heavy growth of timber, principally yellow pine and fir, and contains many quartz lodes or ledges which have been since ascertained to be rich in sulphurets of silver.

June fourteenth, the line was run across the Truckee, and on the eighteenth we crossed the Henness Pass Road, camping near Bull's Station. From thence to Long Valley, a distance of over six miles, the country is rolling and covered with yellow pine and mountain mahogany. The line crosses Long Valley one hundred and sixty-one links east of the western terminus of the fourth standard parallel of the United States Government surveys for the Territory of Nevada, a short distance east of the Antelope Ranch House, and twenty-five chains distant east from John Robinson's house. At this point, on the nineteenth of June, we joined the balance of our train, which had been camped here for some days. Here Mr. King, Topographer, decided to quit the party, owing to his fear of Indians. He was accompanied by two others, who had likewise determined to proceed no further. While camped here an accident unfortunately happened to the only barometer in the party, by which it was rendered perfectly useless; it had been fastened to one of the tent poles, when a sudden gust of wind upset the tent, throwing the barometer to the ground and breaking the tube.

From Long Valley to Honey Lake Valley, the line passing over a high dividing ridge, and twenty-four chains east of a well marked peak, which we designated Boundary Peak, descends into Honey Lake Valley about two miles west of a camping place known as Sage Fort, near a small stream.

At this place, as we had received information that a petty warfare was continually waged between the citizens of Honey Lake and the Indians, I deemed it best to send to Susanville for reinforcements, and in the course of two days had an addition to my party of six men, who furnished their own horses and equipments.

From Lake Bigler to this place the line had been thoroughly chained, but I deemed best from thence to the Oregon line to dispense with chaining, taking the latitude accurately every day, and triangulating to prominent objects. The line crosses Honey Lake Valley east of the lake, about eight miles and thirty-eight chains west of High Rock Spring, from thence over a barren volcanic country to Rush Creek, crossing said creek one quarter of a mile east of Rush Creek Station. Between High Rock Spring and Rush Creek it crosses a small valley, hitherto undiscovered, and named by us Skedaddle Valley, from the following circumstance, viz: On first discovering it we found a number of Pi Utes, of the Smoke Creek Band, who seized their weapons and rushed to the rocks, apparently to give us a warm reception. We immediately signalled them, held a parley, and induced some four of them to visit our camp. I then thought it best, in company with one man, to visit the Indian encampment, leaving orders to retain the Indians in our camp until my return. Soon after arriving at one of their bough houses, where we found several more Indians, we were recalled by one of our men, who stated that those retained in camp had escaped, not heeding the weapons which were aimed at them, but not fired. I then deemed it best to move camp that night, which was done, arriving at Mud Springs about twelve o'clock. Luckily, the line had been run nearly to Rush Creek that day. It was afterwards found by the soldiers who went there to hunt the Indians, that there must have been at least fifty camped at that point, and that they must have departed almost simultaneously with ourselves. I have consequently named the place Skedaddle Valley, thinking, however, that the victory was on our side, as we captured one gun from the enemy.

At Smoke Creek Barracks, four miles from Rush Creek, through the kindness of Lieutenant Tillinghast, in command at that point, I obtained the services of four soldiers—Eland, Shute, Winters, and Willie—to each of whom, as well as to the Lieutenant, I wish to return my thanks, as well as those of the party, for their gentlemanly conduct and promptitude in acceding to my request.

From Rush Creek to Surprise Valley, the line was over high volcanic mountains, crossing Painter Valley and several grassy valleys, or rather ravines. Through Surprise Valley, so named by a party who supposed upon seeing it two years ago that they were the discoverers, the line seems almost to be naturally defined, that portion on the east side of the lakes, three in number, through two of which the line runs, being barren and destitute of vegetation, whilst on the westerly side it is covered with a rank growth of grass and clover, is well watered, and apparently susceptible of the highest degree of cultivation. The waters of the lakes above mentioned are alkaline, and it was stated by one of our party who had travelled on the Lassen Road (which road crosses the valley between the second and third lakes) in the year eighteen hundred and forty-nine, that no such lakes existed at that time. I have since heard this statement confirmed; however, the valley seems to have been but little explored previous to our visit, and I very much doubt if any white man had been the full length of the same. From Surprise Valley, the line runs over a high rocky divide, descending to Crane Lake, and connecting with the forty-second parallel, where the same is naturally defined by a large creek, or stream, in a cañon with almost perpendicular sides of rock one hundred and fifty feet in depth. At this point, while taking observations for latitude, July the seventh, (our camp, with a large portion of our men, being some three miles distant,) we were suddenly surprised by the appearance of some Indians of the Modoc tribe, who did not discover us until the shout of "Indians" was given. Apparently surprised, they retreated across the ravine or cañon, and built a signal fire, immediately answered by others, while we finished our observations; and after building a stone monument, (probably not as perfect as though we had been undisturbed,) retreated to camp—the Indians recrossing the cañon, and building several more signal fires.

Upon arriving at camp a consultation was held, and, as we were not in a good location for defence, it was decided to move some miles further on our return. While engaged in packing, defiant shouts were heard, and Indians seen on the surrounding hills, their heads decorated with war plumes, and apparently anxious for a conflict. We, however, experienced no trouble, arriving at Smoke Creek July eleventh, where I dismissed the escort, and, with the balance of the party, arrived at Lake Bigler July twenty-fourth. I submit with this a copy of the field notes descriptive of the line, the general features of the country, the number of monuments, the location of the same, etc. I have been unable to prepare the rough maps required by you, owing to the preparations necessary for the Southern survey.

In conclusion, my thanks are due to Acting-Governor Clemens of Nevada Territory, for his kindness in promptly giving me a requisition on the military authorities at Fort Churchill for a supply of Minié muskets and ammunition, thereby obviating the delay and expense attending the procuring of the same from the State of California.

I wish to bear testimony to the untiring exertions of Mr. Lawson, upon whom much of the labor of the expedition has devolved, and to whom too much credit cannot be given.

I have the honor to remain, very respectfully,

Your obedient servant,

JOHN F. KIDDER,
Engineer in charge of Survey.

FROM THE DESCRIPTIVE NOTES OF THE SURVEY.

NORTHERN LINE.

From the intersection of the thirty-ninth parallel of north latitude with the one hundred and twentieth meridian of west longitude to its north shore, for a distance of sixteen miles and thirty-six chains, the boundary line falls within and passes nearly through the center of Lake Tahoe.

This beautiful sheet of fresh water lies in a deep basin formed by a fork in the Sierras south of the lake and a high range of mountains on the north, running from the East Fork and nearly connecting with the West, leaving barely room for the Truckee River, which is the outlet.

This basin from summit to summit averages about twenty miles east and west, and forty miles north and south, and the mountain peaks of the ranges surrounding it have an elevation of one to four thousand feet above the level of the lake.

The lake is twenty miles long from north to south, and varies in width from eight to ten miles from east to west, and has an elevation of about six thousand three hundred feet above the level of the sea. Its surface comprises an area of about one hundred and fifty square miles. Its length upon the one hundred and twentieth meridian is twenty miles and thirty-one chains, and its greatest width ten miles and sixty chains. The longest straight line lying wholly within it, measures twenty-one miles and sixty-seven chains in a direction bearing north 19° east and south 19° west.

The average depth of twenty-one soundings taken on the one hundred and twentieth meridian, is nine hundred and thirty-four and twenty-four one-hundredths feet; that of twelve soundings, extending over a distance of twelve consecutive miles, exclusive of three on the north and six on the south shore, is fourteen hundred and twenty-four and six one-hundredths feet. The greatest depth reached was fifteen hundred and twenty-three feet. The deep soundings invariably show the bottom to be composed of a fine impalpable mud, except one made some three miles from the north shore, where the lead was bruised upon a rocky bottom at a depth of twelve hundred and forty-two feet. The shoal soundings gave a bottom of sand, or sand, gravel, and boulders. Its waters are

pure and transparent, and abound in the finest quality of lake trout. Its outlet is the Truckee River, which at the point where it debouches from the lake has a capacity equal to a current four feet deep by sixty in width, moving at the rate of three miles per hour. It is fed by numerous streams from the surrounding mountains, many of whose highest peaks are covered with perpetual snow. Its shores for the greater part are bold and rocky, alternating with sand and shingle beaches in the more sheltered places.

Evidences are not wanting to prove that this lake once occupied a much greater portion of the valley in which it is situated than at present. Beaches of water-worn pebbles are found, ranging from the present water-line to a height of from forty to sixty feet above it.

The loose character of the rock forming the barrier at its outlet, through which the river has apparently deepened its channel, warrants such a conclusion. The country about the lake, both in the valley and upon the mountains, is covered with a moderately heavy growth of timber of excellent quality for the manufacture of lumber, for which purpose several mills have already been erected. A more particular description of this timber will be given in another part of the report.

Perhaps one of the most remarkable features of this lake is the fact that its surface is never frozen, which, at its great altitude, surrounded by lofty mountains covered with snow, must be attributed to its great depth. The purity of its waters, the salubrity of the climate, and the boldness of the surrounding scenery, situated as it is upon the principal thoroughfare between California and the rich mineral region of Nevada, render it a favorite place of Summer resort to the people of both sections.

From the north shore of Lake Tahoe to the head of Long Valley, a distance of twenty-seven miles and fifty-six chains, at a point where the boundary line intersects the Fourth Standard Parallel of the United States Land Surveys, our line lay across the heavy range of the eastern summit of the Sierras, which here deflects from its more general north and south course east of the lake, and trends in a north-westerly direction, uniting with the western summit to the north and west of Dog Valley, in California.

This spur or summit is rough and broken, and is intersected by numerous deep and rocky cañons and ravines.

There is a heavy growth of timber upon these mountains, consisting of yellow and sugar pine, fir, cedar, juniper, hemlock, and mountain mahogany.

From the lake to Juniper Creek, a distance of fifteen miles, the formation is trachytic, and the ridges have an easterly and westerly trend, the highest of which has an elevation of about seven hundred feet above the lake, as ascertained by barometrical observations of the survey.

From Juniper Creek to Damnation Cañon the rock is talcose slate, with numerous quartz veins of great width and reputed richness in the precious metals. While the veins have a bearing in the main approximating to the meridian, the trend of the State is from north-east to south-west.

From the cañon above noted, which is on the twenty-sixth mile of the boundary from the angle in Lake Tahoe, and through which a considerable stream of water flows in a northwesterly direction to the Truckee, a few miles below, the trachyte again occurs and continues to thirty-eight chains on the thirty-first mile, where a large quartz vein is met with, and which probably occurs at or near the junction of the trachyte with granite, as the latter rock is soon after observed along the

cañon of the Truckee, forming a portion of its walls and underlying the bed of the river.

The Truckee, from the point where it debouches from the lake to O'Neil's Station, on the Henness Pass Road, flows through a deep, bold, rocky cañon, the lower portion of which, as has been stated, is composed of granite, while the higher peaks and mountains adjoining are trap, trachyte, etc.

There is a considerable valley on the Truckee, beginning at a point some eight or ten miles from the lake, and extending to within three or four miles of the boundary. It is in its course through this valley that the Truckee receives the outlets of Donner and Truckee Lakes, as also several smaller streams. This valley, which is of considerable extent, has received the name of Squaw Valley, and is attracting the attention of the public on account of the numerous quartz veins which have recently been found there, and which are believed to be rich in gold and silver, but principally the latter. Several town sites have been located and surveyed in the vicinity of the new mines, and all the most valuable timber and ranch lands claimed. Of the real value of this as a mineral region, but little can be definitely determined in the present undeveloped state of the district. These mines are upon the slate formation described on the boundary line from Juniper Creek to Damnation Cañon. The surrounding country is heavily timbered, and the streams afford abundant power for mechanical purposes. Good meadow lands are abundant in the smaller valleys.

From the lower end of this valley to O'Neil's, the cañon of the Truckee is narrow and rugged, with but little or no bottoms. But at this latter point the river makes a sudden deflection to the eastward into the sage plains of the Great Basin, which course it holds for a distance of nearly thirty miles, when it again turns to the northward, and after passing through another deep cañon, is finally poured into Pyramid Lake, from which there is no outlet.

Some twelve miles below O'Neil's, are the Big Meadows, lying partly upon the Truckee and partly upon Steamboat Creek, the outlet of Washoe Lake, which finds its way into the river at this point.

From the Big Meadows, for some eight miles, the river runs through a rocky cañon, but of sufficient margin to admit the passage of a wagon or railroad secure from the influence of the river at any stage of its waters. It is through this cañon, in fact, and along this river, from the lower crossing to Squaw Valley, and from thence via Donner Lake through the Donner Pass to the Valley of the Sacramento, that the route of the Pacific Railroad is proposed to be located.

From the crossing of the Truckee, by the line to Ball's Station, the trachytic formation described south of the stream is found occurring again, but at the latter point gives place to a brecciated conglomerate, which continues to Dog Creek, the outlet of the waters of Dog Valley, on the fortieth mile.

At Ball's Station, which is situated on the Henness Pass Road from California to Nevada Territory, the mountains are comparatively low, and covered with a heavy growth of timber.

From Dog Valley Creek to the head of Long Valley, the formation is trap, changing to more recent volcanic lavas at the latter point.

From the forty-fourth to the forty-eighth mile, near the Antelope Ranch Station, on the Honey Lake and Washoe Road, the country is level, comprising a small basin-like valley, in the eastern portion of which a small alkali lake is situated. A large portion of this valley is

occupied by meadow lands, and its formation undeterminable from the amount and character of the superficial accumulations.

From Antelope Ranch the line passes along the base of a range of granite mountains, which, beginning at a point about one mile north of the small alkali lake just described, at the head of Long Valley, continues east of and parallel with the boundary, to the end of the fifty-eighth mile. The western slope of this range is much broken by ravines which furrow its side. It is destitute of water, and only here and there do you find a stunted juniper bush, or a straggling nut pine.

From the fifty-eighth to the sixty-first mile we intersected Long Valley, leaving it again at the latter named distance, and continued across low hills and dry ravines for four miles, to the mouth of Dry Valley, on the sixty-fifth mile.

This valley is about three miles wide, and some fifteen miles long from east to west, abounding in wild rye in the bottom, and bunch grass upon the sides of the surrounding hills. It is destitute of water, except upon the slopes of the hills on the south, where a few springs of good water are found. It opens into Long Valley, which from this point bears to the north-west into the Valley of Honey Lake, twelve or fifteen miles below.

Long Valley is about sixty miles in length, varying in width from one to five miles. This valley lies between the Sierras on the west, and the granite range already described upon the east, commencing in the mountains, near O'Neil's. In fact the water shed between this and the Valley of the Truckee, is not more than two miles from the above named station.

During the wet season there is a small stream running its entire length, but at other times water is found only in deep holes, and is strongly alkaline. In its lower portion are numerous hot springs, the most celebrated of which are on the ranch of John Robinson, some twenty-five chains west of the line, near the end of the sixty-third mile. This valley contains a fair amount of agricultural lands, with fine meadows of native grass and clover. Snow seldom remains in the valley for any considerable length of time. The whole valley is settled and improved, and considerable stock is raised and kept in it.

The Honey Lake Road from Washoe passes nearly through its entire length, and about midway is the Beckwith Pass of the Sierras, opening from it into Sierra Valley, California, and through which runs the Beckwith Pass Road.

The valley in the lower portions is destitute of timber, but the Sierras on the west furnish an abundant supply of this important article, with sufficient water-power for its manufacture. The mountains upon the east have already been described as being destitute of both timber and water. This is true of their western slope, but upon their eastern slope there is some yellow pine, numerous springs, and several small streams, as also much excellent grass and a few native meadows. To the eastward, and between Long Valley and Pyramid Lake, are a succession of similar ranges with intervening valleys, the most inconsiderable of which is Winnemucca Valley, named from the celebrated Chief of the Pi Ute Indians.

As we have now fairly entered upon the desert plains of the Great American Basin, it may be well, at this point, to notice the leading characteristics of this singular country.

The end of the forty-third mile marks the limits of the tall pines and

heavy forests of the Sierras, with their numerous springs and streams of the purest water. On the one hand and on the other are the dry arid plains of the Great Basin, with their vast extent of alkali deserts, their rough and timberless volcanic hills and lava covered plateaus, their numerous mineral and hot springs, destitute for the most part of anything that tends to impress the mind with that idea of pleasure and satisfaction which is imparted to it in a country covered with a verdant and luxuriant vegetation; and while it is confessed that its hills and mountains are filled with the precious metals in the most lavish abundance, the whole country appears as if the Creator had cursed the works of his own hand, until every feature bears the marks of harshness, sterility, and desolation.

It is a fact worthy of mention in a description of this region, that the piñon, (nut pine), *Pinus Edulus* of botanists, which is first met with among the low hills on the eastern slope of the Rocky Mountains, is nowhere found west of the Sierras, or even on their eastern slope, on the granitic formation of these mountains proper, although it is sometimes met with upon spurs, from the more recent formation of the Great Basin, in close proximity to them.

This tree was not met with on the survey north of Honey Lake Valley, although the juniper (*J. Occidentalis*) was found as far north as the Oregon boundary, and Lieutenant Williamson mentions it as occurring upon the Klamath River, still further north.

From the end of the sixty-sixth mile to the seventy-fourth, we run over a high isolated mountain, between Long and Dry Valleys and Honey Lake Valley. This mountain has a granitic base, but the higher portions and summits are covered with basaltic peaks, which in some places approach to the columnar structure.

The most notable of these peaks is one described in the field notes of the survey by the name of Boundary Peak, from its close proximity to the line, and which readily serves to mark its position for a great distance.

The base of this mountain is dry, with a moderate growth of juniper, but above the granite there are several springs, and one or two small streams flowing down its northern slope, and while the juniper disappears in the vicinity of the basalt, its place is supplied by a most luxuriant growth of bunch grass which covers the summit.

From the seventy-fourth to the eighty-ninth mile we passed across the eastern portion of Honey Lake Valley, and, at the nearest point, about five miles from the lake.

This portion of the valley is a level alkaline plain or bottom, but a few feet above the lake at ordinary stages, and during the season of high water, is not unfrequently submerged, and it is even claimed that the waters of this lake are sometimes connected with those of Gwin and Pyramid Lakes, through the low pass upon the east of the former, which is not improbable, as this pass is but a portion of the same plain which we have been describing.

The entire length of Honey Lake Valley, in the level portion of it, is about sixty miles from east to west, and its width from north to south from fifteen to twenty miles.

The greater portion of this valley from the head of the lake eastward is dry and barren, and destitute of vegetation for the most part, except sage brush and greasewood. Numerous hot springs abound in some parts of this valley, especially upon the north side, and near the east end of the lake.

Near the Sierras on the west and south-west of the lake, as also on the Susan River, which empties into the lake on the north, are excellent agricultural lands, nearly all of which are under a high state of cultivation, largely remunerating their owners for the labor bestowed upon them. The mountains abound in heavy forests of excellent timber, and the streams from them afford sufficient power to operate mills, several having already been constructed, which are now manufacturing lumber and sending it to Humboldt and other portions of the country. Fine crops of wheat, corn, oats, and barley are produced, and vegetables of all kinds grow luxuriantly.

There are strong evidences that this valley, as also those of Pyramid and the Mud Lakes, if not others adjoining, have at some remote period formed an inland sea. Such evidences are found in the existence of coral reefs in these basins at an altitude much above the present level of the lakes.

At High Rock Spring occurs one of those singular formations, consisting of a reef some five hundred feet in length and thirty to forty feet in height. Other reefs of less extent occur in other parts of Honey Lake Valley. Among these, two varieties were noted: *astrea ananis* and *syngapora romulosa*. These formations will be noted again in the description of Mono Lake and Valley, where they occur more abundantly, both in the lake, and on the shore at a great elevation above the water.

Honey Lake, so called from an excretion produced from a small insect, and popularly known as the "honey-dew," is about twelve miles long by six to eight in width. Its waters are shallow and strongly alkaline. Upon one or two occasions its bed became nearly dry. A full and complete map of this valley will be furnished from such data as will give a correct idea of everything of importance connected with it.

From the eighty-ninth to the one hundred and forty-seventh mile, the country consists of plateaus, and is almost entirely of volcanic origin; it is quite destitute of timber, juniper *only* being found in small quantities, sometimes only a single individual or two being met with for ten or twelve miles; again, considerable quantities are found in more favorable localities, the most considerable of which is on the southern slope of the hills to the northward of Painter Valley, and a second body of some extent north of Big Cañon, on the one hundred and forty-second mile.

This plateau consists of volcanic lavas and scoria; sometimes occurring in horizontal layers of great thickness, sometimes broken up in rough and irregular masses of great height; again, the surface is strewn with boulders of scoria, and deep, yielding beds of ashes.

Numerous abrupt cañons traverse this plateau in every direction. The first considerable one is that of Smoke Creek, through which the Humboldt and Honey Lake Wagon Road passes, affording the most feasible and direct route between the two sections. This cañon opens to the east into the valley of the Mud Lakes. The road continues up it for only about six miles, when it leaves the main cañon to the right, and follows the cañon of Rush Creek, a branch of Smoke Creek, and from the head of this, passing a low divide, follows down other cañons to Honey Lake Valley.

There are several stations along this road, one near the line, which is noted in the field notes of the survey.

The second is that of Painter Valley and Creek, and which in some portions is from five to eight miles in width, forming a considerable valley, by the name above given, and across which the line passes for some distance; in some portions of this valley there is considerable grass, and

a small stream of water. This valley opens through a narrow portion of the cañon into the same valley as that of Smoke Creek.

The third is a very deep cañon, on the one hundred and forty-second mile. This cañon is about one mile in width, and opens from the valley of the Mud Lakes westward into the Madelaine Plains, which lie to the west of the plateau, and between it and the Sierras.

These plains are of considerable extent, but as they were not visited by our party, a full description cannot be given here; they are believed, however, to consist of a dry and arid waste, covered with sage brush and wild rye, with no considerable interest attaching to them.

Throughout the plateau of which we have been speaking, water is found in considerable quantities, more than would at first be supposed, judging from the general character of the country, and its occurrence here must be attributed mainly to the semi-stratification of the beds of lava which we have already described, and along the line of which most of the springs are found to originate.

To the east of this plateau, distant from four to eight miles, lies the great Valley of the Mud Lakes, which is too well known to need a description here. In a small cañon to the north of Deep Cañon a sandstone rock was observed, probably of the Devonian series, but even here the surface was covered with a cap of volcanic rock, and it is not improbable that this formation extends over a large portion of the plateau, and which is merely covered with this capping of volcanic rock. In the vicinity of vents, however, this and other formations have been much broken up and displaced by the igneous force.

From the one hundred and forty-seventh to the one hundred and eightieth mile, the line passes through the eastern portion of a large and fertile valley, named by parties who have visited it before, Surprise Valley, Nightingill Valley, etc. The former name has been adopted by the survey as an appropriate one, and which has become more familiar to the public than any other.

This valley is about fifty miles long, north and south, its width varying from ten to twelve miles from the base of the mountains, and twenty to twenty-five from their summits.

Three considerable lakes occupy a portion of this valley, designated as First, Second and Third Lake, counting from the southern part of the valley. The First and Second are connected by a narrow channel, some two miles in length. The Third is separated from the Second by a low sandy ridge, not more than three miles in width.

These lakes are fed by numerous streams from the mountains on the west of the valley, but as they have no outlet, the water is strongly impregnated with mineral substances, mostly alkaline. Their aggregate length cannot be far from forty miles. The valley upon the east side of the lakes is barren and alkaline, and the mountains for the most part destitute of water and timber, there being only a few hot springs, and a few scattering junipers.

But strangely in contrast with this sterility are the rich and fertile meadows of the western portion. On the east, you ride along a narrow bottom between the mountains and the lakes, into the soft sand and ashes of which your animal sinks at every step, not unfrequently falling at length, as he, too, suddenly strives to gain a surer footing by turning aside upon more inviting and often more treacherous ground. There is no grass, and only a stunted growth of the desert-loving sage brush and greasewood, from which even the rabbit and sage hen have fled.

If water is met with at all, it is hot and alkaline, and only at two or

three points is there sufficient grass for a train of animals. But on the west, for more than sixty miles by the windings of the valley, your route is through extensive meadows of the finest grass and clover, growing with a luxuriance and profusion that appears almost tropical in its character. You force your animal with difficulty into the tangled mass of clover, grass, and peavine before you, and perhaps a few yards further on you are completely enveloped in the dense mass around, which often reaches above your head, even when mounted on horseback, and through which you find it difficult to direct your course without the aid of a compass—for these meadows often stretch away in unbroken line for many miles around you. Streams of the purest water come dancing down over beds of gravel from the mountains above, where their fountains leap forth from the regions of eternal snow.

Herd of antelope and deer are seen grazing in the rich pastures which these meadows afford, and flocks of sage hens are constantly whirring up before you. The streams abound in fish, and furnish an abundant supply of water for agricultural and mechanical purposes.

The mountains are covered with a heavy forest of pine and fir, and all along their slopes to their very summits they are covered with grass.

The amount of arable land in this valley cannot fall much short of one hundred thousand acres. Good roads can readily be opened into it through several prominent passes, from all portions of the surrounding country—in fact, the old Lassen Immigrant Road passes through a portion of it. The timber on some portions of the mountains must be considerably nearer to the Humboldt mines than any other now known. In the southwestern part of this valley, at the base of a low volcanic mountain, and near the shore of the first lake, within the distance of some two miles, are not less than a hundred hot springs, while above, and but a short distance from them, is a small lake of pure, cold water.

The geological formation of this valley and adjoining mountains differs from any heretofore met with on the boundary. The mountains upon the south, as previously stated, are of volcanic origin; but those upon the west, and a portion of the eastern range, are stratified, showing the Devonian and Carboniferous series.

These formations have but little dip, and if they were not intersected by numerous fractures which have been much denuded by the elements, they would present the appearance of a high table mountain, such being their real structure, modified, as we have seen, by fractures and denudation.

The inclination of the strata is *from* the valley on either side, thus making this basin to rest upon an anticlinal axis. The summits of these mountains, as also their slopes, in many places, are strewn with volcanic scoria and ashes.

From the character of the formation above given, they could hardly be considered, even in the absence of other evidences, as belonging to the Sierra Nevada range, although much doubt seems to exist in the mind of the public as to their true position.

I am inclined to regard them as a separate and distinct range, and would suggest that they be given an appropriate and distinguishing name.

From the one hundred and eightieth mile to the Oregon boundary, a distance of twenty-seven miles, the country is quite uniform in its physical features, and the character of its formation; the surface is rough and broken, with scattering juniper, and in that portion around Crane Lake,

which occurs on the two hundred and third mile, there is considerable grass, both in the small valleys and upon the surrounding hills.

Near the one hundred and eightieth mile is a considerable stream, flowing from the higher portions of the mountains east of Surprise Valley, but which loses itself in the foot hills nearer the Lake.

A considerable stream finds its way into Crane Lake from the west. This lake, which is some two or three miles long and one or two miles wide, has an outlet to the north-east, flowing into another stream near the Oregon State line. On the west side of the lake, at the mouth of the stream mentioned above, is a fine meadow, of limited extent.

At the termination of the line on the Oregon boundary, a considerable river, from the mountains on the west, flows through a deep rocky cañon to the eastward of the line for about two miles, and then bears to the northward as far as we could trace its course with the eye; still further to the northward high table mountains are visible, probably a continuation of those on the west of Surprise Valley.

Looking to the north-east, a lone butte lifts its head far above the surrounding country; eastward, the country is rough and mountainous. Between Surprise Valley and Crane Lake the hills are smooth and rounded, and their surfaces covered with water-worn gravel. This portion has but little timber, but abounds in fine bunch grass.

This whole section, between the main ranges on either side, is of volcanic origin.

The entire region of country appears to be well adapted to stock raising, and would seem to invite an early and profitable settlement.

From Honey Lake to the Oregon line, there are but few indications of metallic deposits.

A few veins of jasper occur south of Deep Cañon, but gave no indications of metal. Obsidian is an abundant product of the country from Honey Lake to the Oregon line, and in one instance, a beautiful agate was found on the shore of Second Lake, in Surprise Valley. Corneliangs occur in great quantities near the line, on the north shore of Lake Tahoe; the specimens, however, were generally small.

No other minerals worthy of note were observed on the northern trip.

FROM THE DESCRIPTIVE NOTES OF THE SURVEY.

SOUTHERN LINE.

From the intersection of the thirty-ninth parallel of north latitude with the one hundred and twentieth meridian of west longitude, the southern portion of the boundary line makes an angle with the meridian of $48^{\circ} 56' 45''$, constantly varying in its bearing as it approaches the Colorado River, in latitude 35° north and longitude $114^{\circ} 36'$ west, as determined by certain geodetic principles. Four miles and thirty-two chains of the line fall within the lake.

From the shore, which at this point is the most southeasterly portion of the lake, and which is here marked by a low, sandy beach for about one mile, the country is low and level, being but a few feet above the water; the soil consists of sand and gravel, and is terraced by what appears to have been former beaches of the lake.

This portion of Lake Valley is covered with a moderately heavy growth of timber, mostly yellow pine, while frequent intervals of low, wet marshes occur, surrounded by belts of Cembra pine (*Pinus Cembroides*). The Kingsbury & McDonald Wagon Road—(road from Placerville to Carson)—passes through this valley, crossing the line near Lapham's Station. From this station another road follows along the lake shore to the Lake House, uniting with the main road again at Hawthorne's, three miles from Yank's Station. About one and a half miles from the line, on the road to Carson Valley, a new road diverges from the old at Friday's Station, and passing along the shore of the lake for ten or twelve miles, crosses the summit of the mountains on the Johnson Pass, and descends through King's Cañon to Carson City.

At the distance of about one mile from the lake, following the course of the line, the surface is broken by low benches and knobs of granite for about one mile further on, where the steep ascent of the eastern summit of the Sierra Nevadas commences. At six miles and a half the highest point of these mountains is reached, whence they descend abruptly to the eastward; while the summit or divide is not passed until the line reaches the eleventh mile.

The following data may serve to give an idea of the abrupt descent of these mountains on their eastern slope:

Job's Peak, a high mountain situated directly in the eastern summit, is upwards of five thousand feet above Carson Valley at its base, and yet the entire descent is made in little less than two and a half miles in a direct line, being more than two thousand feet per mile. The foot of the mountains is reached on the fifteenth mile, and from this point a sage brush plain descends gradually to the west branch of Carson River, on the nineteenth mile.

The line crosses the Immigrant Road to California (Big Tree Route) near the house of Captain Smith, passing through his ranch, as also that of a Mr. Gibbs.

The Sierra Nevadas, as their name implies, are marked upon their outline by rough or serrated peaks, the higher ones being covered with snow throughout the greater portion of, and in many instances, the entire year. Owing to the friable character of the rock of which they are here composed, they present but few bold escarpments and high, spire-like peaks that form such distinguishing features in other portions of these mountains. Their summits and slopes, as upon the north of Lake Tahoe, are covered with timber, with but little undergrowth, except in the more open places, where a dense, low growth of manzanita, mountain mahogany, and dwarf oak is found. Among the timber of these mountains, by far the greater and most valuable portion consists of pines, several species of which are found. The most considerable of these is the common "yellow" or pitch pine, (*Pinus Brachyptera*, also called *P. Ponderosa*,) which is met with in great abundance near the base and on the lower slopes of the mountains, as also in the valley about Lake Tahoe, and in the lower passes and benches near their summits.

What is probably another species of this pine occurs here, which has been described by Doctor Bigelow "as a large tree with a lighter colored bark than the *P. Brachyptera*." Lumbermen make a distinction between the trees, and they are probably distinct species; the difference in the external appearance of the two species is more marked in the older trees than in the young pines. The sugar pine (*P. Lambertina*) is found in small numbers in these mountains, usually at considerable heights above their base, as is also the fir, two species of which are found here—(*Picea Grandis* and *P. Nobilis*), and the white cedar, (*L. Decurreus*.) Upon the summits a dwarfed growth of pine occurs, (*Pinus Cembroides*,) which was noticed as occurring on the margin of the marshes in Lake Valley, but which here has a gnarled and stunted growth. Upon their northern sides and near their summits, almost in the region of perpetual snow, you find the Douglas spruce (*Abies Douglasie*.) Along the streams and in the vicinity of springs, aspen, (*Populus Tremuloides*,) alder, (*Alnus Oregona*,) and willow, occur, with an occasional native meadow; and yet, upon the whole, these mountains present a desolate and uninviting appearance, much of their surface, even among the timber, being covered with a coarse, arid sand, thus preventing the growth of the more delicate members of the vegetable kingdom, which, in favorable situations, give such rich and endless variety of flowers and velvet lawns.

These mountains are of igneous origin, consisting entirely, in this portion of them, of a coarse, friable, feldspathic granite, which undergoes a rapid disintegration by the elemental action even of such a climate as they possess. Owing to the general absence of rain, and the gradual melting of the snows, only a comparatively small portion of the disintegrated matter is borne down to the valleys, the greater portion remaining upon the surface. Sometimes, upon the steeper slopes, this sand moves slowly down by the force of gravity, like an Alpine glacier,

until its progress is arrested by a less precipitous descent or some intervening object. The granite peculiar to these mountains is met with in low hills and detached knobs in a few places in Carson Valley, and also upon one or two occasions east of Carson River, but it soon gives place to a different formation.

At the base of the Sierras on the east—here, as at the head of Long Valley, on the northern trip—we leave the region of timber and enter the Great Basin, with its volcanic hills, alkali deserts, and sage brush plains. The West Branch of the Carson, which is crossed on the nineteenth mile, rises in the Sierras about twenty miles south of the line, and after uniting with the East Branch some six or eight miles below, flows through the entire length of Carson Valley. The West Branch is about fifty feet wide, and from one to two feet deep. Carson Valley is about thirty miles in length, exclusive of that portion above the line. The arable portion is about eight miles wide. It is settled, and many fine ranches may be seen throughout its entire extent. The Aurora and Carson Road passes through it. Genoa and Mottsville are situated in this valley—one about three miles below, and the other about the same distance above the entrance of the Kingsbury Grade into it.

From the West to the East Carson the distance is four miles and twenty-four chains. This branch is somewhat larger than the western, and like it, rises in the Sierras, but from its source to within a few miles of its junction with the West Branch, it flows through a deep rocky cañon. From the East Carson to the West Walker the physical features of the country are similar to those between the forks of the Carson—in both cases consisting of low rough mountains and ridges, void of any features of prominent interest. The timber is piñon or nut pine, (*P. Edulus*), described upon the northern trip, and which here grows more abundantly, and juniper, (*J. Pachyplaea*), a variety differing somewhat from *Juniperus Occidentalis*, growing to a less height, more generally scrubby, with numerous trunks from the same root, or, what is more frequently the case, branching heavily near the ground. The nuts of the piñon are abundant in this section of country, as also throughout the entire portion of country from Carson Valley to the White Mountains, and are eagerly sought after by Indians, who not unfrequently come from great distances to gather them for their winter food.

From the West to the East Carson, the formation is probably talcose slate, interspersed with numerous veins of quartz, of such vast extent that they appear to be by far the greater portion of the formation. The veins have a general bearing with the meridian. Between the East Carson and West Walker they are less numerous, and finally disappear upon approaching the latter stream. Following up the Carson, however, they extend into the Mogul and Silver Mountain Districts, and are here said to be rich in the precious metals. Serpentine was met with near the West Carson, while trachyte, augite, trap, chickstone, volcanic lavas, and finally, as the descent was made into the Valley of the West Walker, coal shales were found.

From the base of the mountains to the West Walker, a distance of four miles, the bottom is nearly level, and in that portion nearest the mountains are considerable meadows, in what is known as Alkali Valley. There is a small lake in the northern portion, from which the valley derives its name.

In the vicinity of the line are numerous springs; in some of them the

water is pure and cold, while in others it is warm and slightly alkaline, and generally throughout the Great Basin, among the vast number of its thermal springs, but few are found that are not mineral—most frequently alkaline in character.

The Valley of the West Walker—that is, this portion of it, (for it is divided into numerous sections by ridges that traverse it, and through which the river finds its way in narrow, rocky cañons,)—is about thirty miles long, from north to south, and from eight to ten miles in width, from east to west. Above this, and lying at the foot of the Sierras, is another considerable valley, with a rich soil, and numerous streams from the mountains, which latter are covered with heavy forests of pine, fir, etc. Below, commencing at Wellington's Station, on the Esmeralda Road, and including that of Desert Creek, is another large and fertile valley, but destitute of timber, except the piñon and juniper of the surrounding hills, which is valuable for fuel only. Still farther down this branch, and near its confluence with the East Walker, occurs another valley, similar in character to the one just described. West of the valley, upon the line and among the mountains, is a small valley, some seven miles in length and two in width. It is settled, and produces considerable hay. It is known as Slingert's Valley, from one of its pioneer settlers of that name.

From the West to the East Walker, exclusive of four miles from the former stream, a distance of twenty-four and one quarter miles, the country again becomes rough and mountainous, rising somewhat gradually for nine or ten miles over a succession of ridges, and then more abruptly, to a high spur from the Sierras. Three of the highest peaks in the spur are known as the Three Sisters. The southern, and highest of these, has an elevation of eleven thousand seven hundred and forty-two feet above the sea level. The line passes between the southern and middle of these peaks. These mountains, and also the lower hills at their base, are covered with a heavy growth of juniper and piñon. Several small streams which have their source here flow eastward into the Walker. The formation in the lower portions of this spur appears to consist principally of shales of the carboniferous series, while in the higher portions metamorphic and trappean rocks occur, to which supersede more recent volcanic rocks and lavas as the approach is made to the cañon of the East Walker, on the sixty-second mile, which at this point is narrow and deep, but soon spreads out into a considerable valley, including that of the Sweet Water Creek, the principal one of those mentioned as having their sources in the mountains of the Three Sisters. A few miles above, at the confluence of and upon the principal tributaries of the East Walker, are the "Big Meadows." This valley, inclusive of the Meadows, which occupy about one third part of it, is some six miles wide by eighteen in length, exclusive of the mountain slopes. There are but few families at present in this valley, although it is estimated to contain a population of one hundred and fifty persons.

The mountains on the west contain several patches of excellent timber, and there are now in operation upon the streams in this vicinity four saw mills, with one lath and two shingle machines, which, with their present working capacity, will manufacture annually from four to five million feet of lumber, besides a large amount of lath and shingles. The products of these mills, as well as considerable quantities of hewn timber, find a ready market in Aurora at remunerative prices; but even at the present rate of consumption, the supply, owing to its limited extent, must become exhausted in a few years, when Aurora will be compelled to

look to other sources for its supply of lumber. Fortunately for the prospective interests of that place, an extensive tract of timbered land is found to the south of Mono Lake, easy of access, and but little more remote than that of the Big Meadows. There is, however, a scarcity of water in the latter tract, and steam power will be required to operate the machinery necessary to its manufacture. It is estimated that about thirteen hundred tons of hay were cut from the Big Meadows this present season; this hay sells in Aurora at from sixty-five to one hundred dollars per ton. The climate of this valley is unfavorable to the production of vegetables, and even cereals are sometimes injured by frosts which not unfrequently occur here even during the summer months.

Numerous hot springs are met with at the foot of the mountains around this valley; some of the tufaceous formations of these springs are perhaps the most remarkable in the world. Mural shaped masses, from ten to twenty feet high are here formed from the mineral substances held in solution by the thermal waters of these springs, which are precipitated almost immediately upon their contact with the atmosphere. The longitudinal axes of some of these walls are from one to five hundred feet in length, while the transverse ones are not more than ten feet; the summit is crowned with a semi-cylindrical roof, which gives to the whole more the appearance of the work of art than a mere accident of nature. Running through the longer axis of this wall is a fracture from four inches to a foot in width, over the walls of which the water flows producing this singular formation. Where the action of the water has ceased, along the line of the fracture, the opening has been filled by a deposit differing but little from its inclosing walls, save that it is finer, and more compact in its texture.

These springs are situated in a basin-shaped depression, and probably occupy the crater of an extinct volcano.

From the sources of the West Carson to Owen's Lake, and probably for a much greater distance south, the Sierras consist of a single range, broken by deep cañons, and thrown up in high, sharp, angular peaks, which latter feature has gained for them in many places the names of "Castle Peaks," "Castle Mountains," etc., from their many bold bastions, high, frowning walls, and overhanging towers, which are everywhere abundant, especially in that portion of them on the west of the "Meadows." The principal peaks have a general elevation of about ten or twelve thousand feet above the level of the sea, and are covered in the more sheltered places with a cap of perpetual snow.

A stunted growth of cembra pine is met with, even upon the loftiest peaks, when not actually covered with snow, but so dwarfed and gnarled in its appearance, that it is difficult to distinguish the branches from the roots of the recumbent tree. There is but little timber on the eastern slope of these mountains, and this occurs in small patches near their base.

The coarse, feldspatic granite which was observed near Lake Tahoe is here replaced by a hard, compact, porphyritic granite, which withstands the war of elements and the ravages of time, and lifts up its gigantic spires and battling walls in forms of wild sublimity and awful grandeur. Serpentine and sienite are found near the base of the mountains. To the south and on the east of the Meadows the country is of volcanic origin, and the hills are covered with a heavy growth of nut pine and juniper; compact lavas and trachyte are the more common forms of rock; an escarpment of sandstone appears near the Aurora Road, but no distinguishing features were observed sufficient to mark the

period of its formation; near the southern portion of the valley are detached hills of breccia, probably of volcanic origin.

From the East Walker to the Valley of Mono Lake, on the eighty-fifth mile, the formation is the same as that described on the east of the Big Meadows. Granite, however, is met with on the sixty-seventh mile, in Castle Cañon, and to the south-west of the latter point is a high mountain of this formation. Quartz veins are numerous in this vicinity, both in the granite and adjoining metamorphic rocks. These veins are wide and extensive, but give only slight indications of mineral, except iron pyrites, which are very abundant in them. On the seventy-second mile is Rough Cañon, through which flows a small stream of water of the same name. A short distance above the point where the line crosses this cañon, the road from the Big Meadows to Aurora enters it, and following up it for some distance, passes over a plateau for a few miles, when it enters Bodie Cañon and descends it in the direction of Aurora.

Above and below the line in Rough Cañon are many veins of quartz; some of them below are claimed to be rich. Some eight miles above and south of the line in Bodie Cañon, on the seventy-sixth mile, are the Bodie Mines, which are being worked with a favorable prospect of their future wealth.

Some two or three miles below the line in the same cañon begin the quartz mills of the Esmeralda Mines, extending through a portion of this and Esmeralda Ravine to the town of Aurora.

Many of these mills are small and imperfect in their construction, having been built, it would appear, more with a view to test the quality of the rock than to work the ore from the mines; their richness having been satisfactorily determined, however, the erection of larger and better mills was commenced. Some of this latter class are now in operation, working to the entire satisfaction of both the owners and the miners, producing large yields from the better class of rock. There are in and about Aurora fourteen mills, all operated by steam; they contain in the aggregate one hundred and fifty stamps, with a crushing power of about two hundred tons per day.

Of the mines in this place much remains to be developed, but few claims having as yet been worked in such a manner or to an extent sufficient to prove their *real* value.

Of the wealth of this district, however, there are sufficient reasons for forming a favorable opinion; many of the lodes are undoubtedly rich in both silver and gold.

Much confusion and difficulty exists in regard to the identity and direction of the lodes, and, unhappily, much litigation is the result of these doubts.

The lodes are irregular and confined, and consequently must, in the present undeveloped state of mining operations, give rise to much confusion and needless expenditure.

A thorough system of mining, under the general superintendence of a skilful Engineer, combining both theory and practice, would aid much in the development of these mines.

From Bodie Creek to the Aurora Road, on the eightieth mile, the line passes across Mount Braly, leaving the Town of Aurora some three and one third miles in the Territory of Nevada.

From Castle Cañon to this point the country is rough and barren, but from this road to the end of the eighty-fourth mile the hills are covered with a heavy growth of nut pine and juniper. The entire formation is volcanic; trachyte, lava, and metamorphic rock abound.

From the eighty-fourth to the eighty-ninth mile the line passes across a portion of Mono Valley, which, from the base of the Sierras on the west to this point is about twenty-four miles in length, and varies in width from eight to fifteen miles. The greater portion of the valley unoccupied by the lake is a dry sandy plain covered with a thick growth of sage brush, with scattering junipers in the north-eastern portion.

Mono Lake lies at the foot of the Sierras on the east, and occupies the western portion of the valley. It is fourteen miles long from east to west, and its greatest width is nine and one half miles. There are two islands in this lake, apparently of recent volcanic origin, as will hereafter be shown.

The waters of this lake are alkaline, and teem with myriads of insects of a novel kind, while swarms of a peculiar kind of fly throng the shore or repose upon the rocks beneath the water—for such are their habits that they sink beneath and emerge from the water as safety or appetite directs their movements.

It has been stated that the waters of this lake are alkaline, but such is the character of most of the lakes throughout the Great Basin. In the case before us, we have, as it were, a concentration of all the alkaline elements combined. Not even the Dead Sea of Palestine can surpass its waters in bitterness. A few streams of fresh water from the mountains feed it, but it has no outlet. The shore is low and uninteresting in its general appearance, and might be entirely so, were it not for a few important features connected with it. In the water, frequently rising ten or twelve feet above its surface, and all along the shore, as also for miles back from it, varying in elevation from the water line to hundreds of feet above it, are reefs of coral rock, the product of a species of infusoria now living and building up their stony habitations in the waters of this singular lake. The highest point at which these reefs were observed could not have been less than three hundred feet above the present level of the lake, and which must have been formed when this portion of the country was submerged. Whether the waters of the lake have subsided; or the whole country has been gradually lifted up out of the water, may be more a matter of speculation than interest, for in either case the evidences would be similar. But the coral reefs are not the only evidences of this change in the relative height of the land and water, for a succession of beaches in regular outline rise one above another as they recede from the shore, as distinct and traceable as the furrows in a plowed field, until they are marked upon the surrounding hills at a great height above the lake.

Upon the smaller of the two islands in the lake, which is the crater, apparently, of a recent volcano, the water line is marked at only about twenty-two feet above the lake, while the cone of the crater rises nearly three hundred feet above it. At this water line the lava is abruptly broken off, as if the molten mass had suddenly been cooled beneath the waves.

From the eighty-ninth mile to the foot of the White Mountains, the country is covered with a heavy growth of nut pine and juniper, destitute of grass, and without water. The whole extent is marked by a succession of ridges, having a northeast and southwest direction. The rock is volcanic lava. Among these hills, and some four miles from the line, in California, is a valley about twelve miles wide by fourteen in length, called Adobe Meadows. There is a small stream flowing into this valley from the southwest. In the eastern and northeastern por-

tions are some small alkaline lakes. The road from Aurora to the settlements in Owens' River Valley passes through these meadows.

MONUMENTS.

The first monument was set at thirty-seven chains on the seventeenth mile from the initial point in Lake Tahoe, and one chain from the shore of the lake; it is on the west side, and near the base of a high rocky point, marked on the map as Boundary Point.

By the shore it is about a quarter of a mile north from a small hot spring, near the edge of the lake, which has been called Juniper Spring, and about one mile east from what is known as Griffith's Place.

This monument consists of a cedar post, seven inches square by six feet in length, set in a pyramidal pile of stone, five feet square at its base and three feet in height.

From the post a fir tree, in diameter some fourteen inches, and seventy-two links distant, in the Territory of Nevada, marked with the letter "N" on a blaze two feet above the ground and facing the post, bears south 87° east; also, a yellow pine, in diameter about sixteen inches, and ninety-seven links distant, in the State of California, marked with the letter "C" on a blaze facing monument, and two feet above ground, bears south $13\frac{1}{2}^{\circ}$ west.

At seventy-two chains and fifty links, on the twenty-fourth mile, a rock, some eighty feet in height and two hundred feet across at its base, occurs directly upon the line. This rock rises to a point, and the line crosses it at the most southeasterly portion where an instrument can be set upon it. A pine post, twelve inches square and six feet in length, was set five chains back from the right (south) bank of the Truckee River, some seven miles, by its course, above O'Neil's. A conical mound of stone, three feet in height and five feet across at its base, was built around the post, from which a yellow pine, eighteen inches in diameter, bears south 89° west, twenty-two links distant in California, and marked with a blaze facing the monument. A yellow pine, thirty-three inches in diameter, bears south $63\frac{3}{4}^{\circ}$ east, twenty-six links distant in the Territory of Nevada, and marked with a blaze as above. On the post are cut with a chisel the letters "C" and "N," facing respectively California and Nevada.

At forty-six chains and twenty-two links on the thirty-eighth mile, a monument was built two chains and fifty-three links south of the Hennes Pass Road. This monument stands upon a rocky point twenty or thirty feet above the road, on the south side, and consists of a pine post ten inches by ten inches square, and six feet long, set in a mound of stone six feet across at base and three feet high, from which a yellow pine tree, eighteen inches in diameter, bears south $42\frac{1}{2}^{\circ}$ east, eighty-nine links distant in the Territory of Nevada, and marked with the letter "N" on a blaze facing monument, and a yellow pine tree, ten inches in diameter, bears south 66° west, ninety-eight links distant in the State of California, and marked with the letter "C" on blaze, etc., as above.

NOTE.—All trees near the line are marked with a blaze on opposite sides, in the direction of the line; and all trees standing on the line have a notch cut in the middle of each blaze.

This monument is about a mile and a quarter above O'Neil's, and about a quarter of a mile west by north from Bull's Station.

At thirteen chains on the forty-fifth mile, the line crosses the Fourth Standard Parallel of the Government Surveys, one hundred and sixty-one links east of the corner to Townships Twenty and Twenty-One north, and Ranges seventeen and eighteen east of the Mount Diablo Base and Meridian. This corner is marked by a square stake set in a mound of stone, and is five miles west of the Peavine Ranch, and near the timber.

At sixty-nine chains fifty links on the forty-eighth mile, four chains fifty links north of the Honey Lake and Washoe Road, a post six inches by six inches square, and six feet long, was set in a mound of stone for a monument. This monument is about midway between the Antelope Ranch (Station) and the house of Robert Ferrington.

The next monument is at thirty-six chains fifty links on the sixty-second mile. It is a pine post, six inches by six inches square, and five feet long, in a mound of earth. This post is marked with the abbreviations "Cal." and "Nev.," on the sides facing California and Nevada respectively, and on the third face with the abbreviation "Bound.," for boundary. This monument is in a curve of an old road, and three chains fifty links east of the new road through Long Valley, and is about three quarters of a mile, by the road, south from the house of John Robinson.

Twenty-four chains west of a point at thirty-six chains on the seventieth mile, is a high, dome-like peak, rising several hundred feet above the general summit of the mountain on which it occurs, and which from its prominence and proximity to the line has been called Boundary Peak. This peak can be seen for a long distance, and forms a conspicuous land mark by which the position of the boundary line may be readily determined at this point.

A mound of stone, eight feet in diameter at base and four feet high, was built at thirteen chains on the ninetieth mile. This mound is near the base of the low hills on the north of Honey Lake Valley, and bears north $23^{\circ} 48'$ west, ninety-three chains sixty links from the very highest point or ledge of rock near High Rock Springs.

At forty-five chains sixty-three links, on the ninety-seventh mile, a small mound of stone was built, on the east side and near the top of a round hill, near the eastern point of a high spur from adjacent mountains, on the west of the line and north-east of Honey Lake.

At thirty-one chains seventy-five links, on the one hundred and eighth mile, a pine post, six by eight inches, and six feet long, was set in a mound of stone, and marked on one of its faces with the word "Boundary." It is twenty-six chains fifty links north of the road from Susanville to the Humboldt Mines, and stands upon a rocky point just above and to the north of Rush Creek Valley, and is visible from the Rush Creek Station. This point is about four miles above or west of Smoke Creek Barracks.

At forty-six chains, on the one hundred and twentieth mile, a small mound of stone was built on the summit of a volcanic hill.

At seventy-five chains forty-two links, on the one hundred and thirty-second mile, a stake was set in a mound of stone, on the summit of a hill north of and adjoining Painter Valley.

At twenty chains, on the one hundred and forty-sixth mile, a similar monument was built. This point is upon the plateau south of and about two and a half miles from the southern end of Surprise Valley.

At eighteen chains thirteen links, on the one hundred and eighty-sixth mile, a mound of stone was built on the summit of a ridge, bearing east

and west on the highest part of the mountains, immediately east of the third lake in Surprise Valley.

The next monument was upon the southern boundary of the State of Oregon, being the intersection of the one hundred and twentieth meridian with the forty-second parallel of north latitude. This monument is placed upon the southerly side of a deep rocky cañon, through which flows a stream some fifty links in width, course east. The monument is a pile of loose stones, and, from causes heretofore mentioned, was but hastily erected. It is located six chains from the bank of the cañon, at a point where said cañon is intersected by a smaller one, through which flows the outlet from Crane Lake. From an examination of Fremont's report of the expedition of eighteen hundred and forty-three and eighteen hundred and forty-four, his party would seem to have camped at or near this point, on December twenty-sixth, eighteen hundred and forty-three, as his description of the country is very similar to that found by us, and his observation for latitude on that day showed his camp to have been located on the forty-second parallel.

The first monument on the southern portion of the line was set upon the lake shore at thirty-two chains sixty links, on the fifth mile, from the initial point in the lake; it consists of a hewed pine post eight inches square and eight feet long, set firmly in the ground.

This monument, the two following described, and the one upon the northern shore of the lake, are to be replaced by monuments of cut stone.

At fifty-one chains sixty links, on the fifth mile, another monument was set on the north side of the road leading from Lapham's Station to the Lake House, and about one half mile from the former station.

This monument is twelve inches square, fourteen feet long, and about nine feet above ground—painted white, and the words "California" and "Nevada" cut on the sides facing the State and Territory respectively.

On the east side of the Kingsbury & McDonald Road through Lake Valley, at seventy chains sixty links, on the fifth mile, a monument consisting of a pine post ten inches square and seven feet long, was set about half a mile from Lapham's Station.

At forty-eight chains ten links, on the sixth mile, was set firmly in the ground a large log, upon which was erected the Observatory of the Boundary Survey.

At sixty-seven chains twenty links, on the sixth mile, the boundary line intersects the township line of the Government Surveys one chain fifteen links west of the corner to Sections Thirty-Four and Thirty-Five, on the south boundary of Township Thirteen north, Range eighteen east of the Mount Diablo base and meridian.

A stake was set in mound of stone at forty-four chains fifty links, on the seventh mile, and on the summit of a high spur of the Sierras bearing south-west and north-east.

At seventy-six chains seventy links, on the sixteenth mile, a pine post ten inches square and seven feet long was set at the forks of the road, about a quarter of a mile north from the house of Captain Smith, at the head of Carson Valley, marked with the letters "C." and "N."

At fifteen chains fifty links, on the nineteenth mile, on the east bank of the West Branch of Carson River, a hewed pine post eight inches square and six feet long was set in a square pile of stone about three feet in height.

At fifty-two chains, on the twenty-third mile, a pine post ten inches square and seven feet long was set in a mound of stone on a high bank

above the river bottom, on the south side of the East Branch of Carson River, and about one mile above Young's Crossing.

At sixty-six chains twenty-five links, on the thirty-fourth mile, a post five inches square and six feet long was set in a mound of stone near road at edge of Alkali Bottom, and about one half mile north of the house of William Humphrey.

At three chains eighty links, on the thirty-eighth mile, a post four inches square and six feet long was set on the east bank of the West Branch of Walker River, about one mile above the house of Harry Raymond.

At thirty-six chains forty-one links, on the forty-second mile, a mound of stone was built on the summit of a ridge bearing north-east and south-west.

At sixty-one chains thirty-eight links, on the forty-sixth mile, a mound of stone was built on the summit of a hill bearing north-east and south-west.

At sixty-seven chains eighty-eight links, on the fifty-second mile, a mound of stone was built near the summit of the Divide between the East and West Walker Rivers, between the middle and southern peaks of the Three Sisters.

At seventy-three links, on the fifty-fourth mile, and at thirty-three chains, on the same mile, stakes were set in mounds of stone for monuments.

At four chains twenty-five links, on the fifty-fifth mile, center-point of line was marked on top of stake beneath a mound of stone.

At thirty-seven chains seventy-five links, on the fifty-ninth mile, a pine post six inches square was set near road through the Sweetwater Valley, in mound of stone, and marked with the letters "C." and "N."

At nineteen chains fifty links, on the sixty-second mile, a post six inches square, and six feet long, was set in a mound of stone, near the road, and on the west bank of the East Branch of Walker River, and marked with the letters "C" and "N."

At forty-five chains fifty links, on the seventy-second mile, at a point of rocks near the road and the forks of Rough Cañon Creek, a pine post four inches square was set in a mound of stone and marked with the letters "C" and "N."

At sixteen chains, on the seventy-sixth mile, and on the road from Aurora to Big Meadows, and at twenty-seven chains on the same mile, and on the east side of the road from Aurora to the Bodie Mines, monuments, consisting of sawed pine posts, seven inches square, marked with the abbreviations "Cal." and "Nev.," and on a third face "Bound.," were set in mounds of stone.

At seventy-one chains, on the eightieth mile, a pine post six inches square, and six feet long, and marked with the letters "C" and "N," was set in a mound of stone on the west side of the road from Aurora to Monoville, east of Mount Braly.

At seventeen chains thirty links, on the eighty-ninth mile, a cedar post six inches square, and seven feet long, was set in a mound of stone on the east side and near the road leading from Aurora to Adobe Meadows and Owen's River, etc. The above monument is in the alkali bottom of the Valley of Mono Lake.

At forty-four chains seventy-five links, on the one hundred and second mile, a stake was set in a mound of stone, on the summit of the

ridge. Nine feet in advance of this point, a peg with a nail marking the centre-point of the line, was secured beneath a small mound of stone.

At forty-six chains on the one hundred and third mile the centre-point of the line was similarly secured.

At many intervening points between the monuments above described, are small mounds of stone, stakes, etc., which readily serve to point out the place and course of the line.

STATISTICAL TABLES.

TABLE OF STATISTICS

Compiled from the Official Reports of County Assessors, for the Year 1863, returned to the Surveyor-General.

COUNTIES.	Acres of Land enclosed.....	Acres of Land cultivated	WHEAT.		BARLEY.	
			Acres	Bushels	Acres.....	Bushels
Alameda	81,460	84,320	.....	.....	.....	.....
Amador	38,483	10,290	.....	.....	.....	.....
Butte.....	100,000	60,000	20,000	400,000	15,000	500,000
Calaveras.....	106,676	12,182	.....	.....	.....	.....
Colusa.....	107,000	43,000	17,530	.....	19,000	.....
Contra Costa.....	.....	.....	.....	.....	.....	.....
Del Norte.....	.....	.....	.....	.....	.....	.....
El Dorado	212,500	31,000	165	.....	1,975	.....
Fresno .....	.....	.....	.....	.....	.....	.....
Humboldt	15,636	4,419	973	29,055	109	4,375
Klamath	2,185	1,383	.....	.....	.....	.....
Lake.....	24,550	4,593	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....
Marin	121,274	10,808	3,057	122,280	680	27,200
Mariposa	9,538	2,572	.....	.....	300	9,000
Mendocino	95,500	50,400	.....	.....	.....	.....

Merced.....	18,417	15,000	1,530	25,840	3,750	75,090
Mono.....	.....	.....	.....	.....	.....	.....
Monterey.....	117,400	22,191	3,270	63,400	6,780	834,200
Napa.....	80,000	35,000	30,000	600,000	2,400	72,000
Nevada.....	.....	.....	.....	.....	.....	.....
Placer.....	136,976	21,100	4,509	71,048	2,950	49,874
Plumas.....	.....	.....	.....	.....	.....	.....
Sacramento.....	98,980	32,043	6,185	152,000	11,630	327,000
San Bernardino.....	20,000	15,000	.....	.....	.....	.....
San Diego.....	4,500	3,060	.....	.....	.....	.....
San Francisco.....	.....	.....	902	34,240	.....	7,240
San Joaquin.....	263,400	175,000	60,000	600,000	70,800	566,400
San Luis Obispo.....	10,000	3,000	500	5,000	1,500	22,500
San Mateo.....	120,200	35,000	12,250	238,250	3,260	96,800
Santa Barbara.....	4,500	1,500	50	1,200	50	2,000
Santa Clara.....	380,000	165,000	77,000	1,250,000	20,000	400,000
Santa Cruz.....	56,340	18,003	7,020	161,992	2,862	103,775
Shasta.....	.....	.....	.....	.....	.....	.....
Sierra.....	12,300	700	.....	.....	18	1,000
Siskiyou.....	54,000	28,000	4,700	70,000	4,000	80,000
Solano.....	360,582	82,828	.....	.....	.....	.....
Sonoma.....	193,161	47,794	.....	.....	.....	.....
Stanislaus.....	28,000	10,653	2,542	32,120	2,648	64,500
Sutter.....	84,300	25,700	.....	105,600	.....	160,000
Tehama.....	51,736	14,612	7,280	127,286	6,205	87,462
Trinity.....	8,457	2,534	100	2,500	156	3,000
Tulare.....	25,000	10,225	.....	.....	.....	.....
Tuolumne.....	89,632	29,678	965	5,190	2,855	3,458
Yolo.....	110,000	50,976	.....	.....	.....	.....
Yuba.....	165,840	38,480	2,680	50,648	12,460	326,800
Totals.....	3,407,923	1,197,984	263,208	4,147,649	191,388	8,833,674

Merced.....	.....	.....	35	709	400	7,030	.....	.....	.....	.....
Mono.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Monterey.....	300	7,500	.....	.....	200	4,000	45	900	250	5,000
Napa.....	825	24,700	30	600	600	.....	25	.....	25	.....
Nevada.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Placer.....	347	1,727	26	60	9	60	.....	.....	.....	.....
Plumas.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sacramento.....	536	17,733	5	114	281	4,925	.....	.....	.....	.....
San Bernardino.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Francisco.....	80	1,600	.....	.....	.....	.....	.....	.....	.....	600
San Joaquin.....	1,000	20,000	700	10,000	600	18,000	300	6,000	20	1,000
San Luis Obispo.....	200	4,000	.....	.....	2,000	80,000	.....	.....	1,000	30,000
San Mateo.....	6,000	240,000	.....	.....	.....	.....	.....	.....	50	1,000
Santa Barbara.....	.....	.....	.....	.....	150	2,400	.....	.....	.....	.....
Santa Clara.....	2,000	60,000	.....	.....	400	14,000	.....	.....	.....	.....
Santa Cruz.....	909	27,838	.....	.....	198	3,943	213	4,316	59	2,095
Shasta.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sierra.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Siskiyou.....	8,800	70,000	250	1,500	300	5,000	.....	.....	20	.....
Solano.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sonoma.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stanislaus.....	.....	.....	.....	.....	200	4,410	.....	.....	.....	.....
Sutter.....	.....	.....	.....	.....	.....	1,600	.....	.....	.....	.....
Tehama.....	37	895	3	40	168	5,894	.....	.....	10	275
Trinity.....	50	1,500	.....	.....	40	1,000	.....	.....	5	125
Tulare.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuolumne.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yolo.....	1,230	24,685	14	240	2,240	58,485	.....	.....	.....	.....
Yuba.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	36,879	803,523	1,163	17,263	9,355	226,579	583	11,216	2,033	61,770

TABLE OF STATISTICS—Continued.

COUNTIES.	BEANS.		POTATOES.		SWEET POTATOES.		ONIONS.		HAY.	
	Acres.....	Bushels.....	Acres.....	Bushels.....	Acres.....	Bushels.....	Acres.....	Bushels.....	Acres.....	Tons.....
Alameda.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amador.....	.....	.....	.....	.....	.....	.....	.....	.....	10,000	12,000
Butte.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Calaveras.....	.....	.....	.....	.....	.....	.....	.....	.....	9,560	10,000
Colusa.....	40	.....	.....	.....	.....	.....	.....	.....	.....	.....
Contra Costa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Del Norte.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
El Dorado.....	.....	.....	.....	.....	.....	.....	.....	.....	5,100	6,000
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt.....	14	400	225	37,980	.....	.....	.....	.....	150	600
Klamath.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marin.....	.....	.....	2,115	253,800	.....	.....	.....	.....	1,500	3,000
Mariposa.....	10	.....	150	15,000	.....	.....	10	2,000	2,000	3,000
Mendocino.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merced.....	93	1,300	210	6,700	25	900	.....	.....	1,430	1,720

TABLE OF STATISTICS—Continued.

COUNTIES.	FLAX.		HEMP.		TOBACCO.		ALFALFA.		COTTON.		RICE.		CABBAGES—Pounds.....
	Aeres... ..	Pounds.....	Aeres... ..	Pounds.....	Aeres... ..	Pounds.....	Aeres... ..	Tons.....	Aeres... ..	Pounds.....	Aeres... ..	Pounds.....	
Alameda.....
Amador.....
Butte.....
Calaveras.....
Colusa.....	65	98	.....	.....	.....	.....	.....
Contra Costa.....
Del Norte.....
El Dorado.....
Fresno.....
Humboldt.....
Klamath.....
Lake.....
Los Angeles.....
Marin.....	25	25,000	.....	.....	.....	.....	.....	.....	18,000
Mariposa.....
Mendocino.....
Merced.....	40	75	.....	.....	.....	.....	.....

TABLE OF STATISTICS—Continued.

COUNTIES.	Acres of Sugar Cane.....	Acres of Broom Corn.....	Pounds of Butter.....	Pounds of Cheese.....	Dozens of Eggs.....	Pounds of Wool.....	Bee Hives.....	Pounds of Honey.....
Alameda.....
Amador.....	60,000	5,000	40,000	150,000	400	4,000
Butte.....
Calaveras	40,000	.....	23,700	122,370	870	.....
Columbia.....	96	.....	.....	.....	.....	.....	50	75
Contra Costa.....
Del Norte.....
El Dorado.....
Fresno	21,610	1,900	8,630	1,000	205	359
Humboldt.....
Klamath
Lake.....
Los Angeles	9,000	25,000	130	6,000
Marin	200,000	600,000	20,000	10,000	30	1,500
Mariposa	2,500	500	.....	.....	.....	.....
Mendocino	215,780	430	4,000
Merced	7,360	50	5,690	.....	.....	.....

TABLE OF STATISTICS—Continued.

LIVE STOCK.

COUNTIES.	Horses—American	Horses—Spanish (Tame).	Horses—Spanish (Wild)...	Horses—Total Number...	Mules.....	Asses.....	Cows	Calves.....	Stock Cattle.....	Beef Cattle.....
Alameda.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amador .....	.....	.....	.....	4,650	1,418	100	6,105	2,800	4,150	1,500
Butte	2,150	1,800	700	2,043	529	137	.....	.....	.....	.....
Calaveras.....	459	1,584	.....	6,327	923	4	6,350	6,110	18,550	.....
Colusa .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Contra Costa .....	.....	.....	.....	150	60	.....	200	175	400	.....
Del Norte	100	50	.....	3,003	1,341	41	2,792	1,012	2,831	.....
El Dorado .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fresno .....	.....	.....	.....	2,067	315	8	5,197	8,253	.....	2,168
Humboldt	2,067	.....	.....	.....	.....	.....	.....	.....	.....	.....
Klamath .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles .....	.....	.....	.....	3,768	84	3	8,300	.....	19,850	1,200
Marin.....	476	1,540	1,752	1,050	250	75	1,100	800	2,500	2,000
Mariposa	250	800	.....	.....	.....	.....	.....	.....	.....	.....
Mendocino.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merced .....	.....	.....	.....	3,075	917	10	.....	.....	.....	.....

TABLE OF STATISTICS—Continued.

LIVE STOCK—Continued.

COUNTIES.	Oxen.....	Total Number of Cattle...	Sheep.....	Goats.....	Hogs.....	Chickens.....	Turkeys.....	Ducks.....	Geese.....	Guinea Fowls.....
Alameda.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amador.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butte.....	400	14,955	48,000	250	30,500	52,000	3,000	200	180	.....
Calaveras.....	.....	8,440	15,115	.....	4,491	15,748	.....	.....	.....	.....
Colusa.....	180	31,190	65,370	227	18,738	9,359	7,583	973	273	150
Contra Costa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Del Norte.....	100	875	40	30	300	600	50	20	.....	.....
El Dorado.....	1,270	7,905	1,742	640	3,100	.....	.....	.....	.....	.....
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt.....	664	16,282	579	27	3,344	5,231	115	196	184	.....
Klamath.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marin.....	1,020	30,370	8,300	.....	1,800	12,500	700	1,100	500	.....
Mariposa.....	500	16,900	5,700	150	4,000	12,000	6,000	150	65	.....
Mendocino.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merced.....	40	63,760	87,000	700	7,635	5,700	580	110	.....	.....

Mono.....	246	66,480	94,680	125	1,580	12,000	320	456	260	.....
Monterey ..	422	11,985	12,000	100	4,000	12,000	1,000	750	175	.....
Napa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nevada.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Placer.....	574	5,344	12,471	448	3,536	12,831	686	508	94	.....
Plumas.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sacramento.....	862	14,632	11,836	473	4,957	23,857	6,434	1,129	234	120
San Bernardino.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego.....	.....	25,000	10,000	2,500	.....	.....	.....	.....	.....	.....
San Francisco.....	220	6,142	3,240	450	8,249	7,500	450	3,140	900	.....
San Joaquin.....	1,600	61,100	25,000	1,200	64,000	25,000	6,000	2,500	1,200	100
San Luis Obispo.....	600	67,600	60,000	2,000	500	3,000	100	400	.....	.....
San Mateo.....	800	9,100	2,500	200	1,600	1,200	800	500	400	.....
Santa Barbara.....	.....	97,000	140,000	1,020	1,500	9,200	125	330	25	.....
Santa Clara.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Santa Cruz.....	820	16,232	2,400	361	2,400	8,246	128	648	127	.....
Shasta.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sierra.....	384	2,910	480	24	576	.....	.....	.....	.....	.....
Siskiyou.....	.....	12,000	3,000	.....	5,000	15,000	1,800	200	100	.....
Solano.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sonoma.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stanislaus ..	100	20,200	18,000	100	2,500	2,000	200	50	50	.....
Sutter.....	700	8,200	22,000	85	6,150	17,000	4,010	535	200	.....
Tehama.....	605	12,678	31,185	64	7,075	17,778	3,103	831	110	.....
Trinity.....	140	741	63	27	187	4,320	28	73	23	.....
Tulare.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuolumne.....	125	6,325	.....	905	600	1,500	100	.....	.....	.....
Yolo.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yuba.....	624	14,476	23,434	224	8,320	32,628	9,482	1,628	380	.....
Totals.....	12,996	643,826	704,135	12,330	196,638	318,198	52,794	16,427	5,540	370

TABLE OF STATISTICS—Continued.

COUNTIES.	STOCK SLAUGHTERED.					
	CATTLE.		HOGS.		SHEEP.	
	Number.	Value.	Number.	Value.	Number.	Value.
Alameda.....	.....	.....	.....	.....	.....	.....
Amador.....	.....	.....	.....	.....	.....	.....
Butte.....	2,748	.....	4,818	.....	2,700	.....
Calaveras.....	.....	.....	.....	.....	.....	.....
Colusa.....	.....	.....	.....	.....	.....	.....
Contra Costa.....	.....	.....	.....	.....	.....	.....
Del Norte.....	.....	.....	.....	.....	.....	.....
El Dorado.....	.....	.....	.....	.....	.....	.....
Fresno.....	.....	.....	.....	.....	.....	.....
Humboldt.....	500	.....	1,000	.....	100	.....
Klamath.....	.....	.....	.....	.....	.....	.....
Lake.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....
Marin.....	1,500	.....	400	.....	300	.....
Mariposa.....	7,500	\$22,500	6,000	\$24,000	5,000	\$10,000
Mendocino.....	.....	.....	.....	.....	.....	.....
Merced.....	.....	.....	.....	.....	.....	.....

Mono	7,480	47,400	250	2,500	1,500	2,250
Monterey						
Napa						
Nevada	5,305		2,365		4,768	
Placer						
Plumas						
Sacramento						
San Bernardino						
San Diego						
San Francisco	38,400		27,240		58,290	
San Joaquin	4,800	50,000	2,800	20,000	4,500	8,000
San Luis Obispo	6,000		100		4,000	
San Mateo	1,900	15,000	500	2,500	1,500	3,000
Santa Barbara	8,000	32,000	100	100	5,000	5,000
Santa Clara						
Santa Cruz	1,215	14,580	1,044	9,400	825	2,075
Shasta						
Sierra						
Siskiyou	2,800	34,000	2,000	17,500	1,100	6,000
Solano						
Sonoma						
Stanislaus	600		200		500	
Sutter						
Tehama	724		3,298		856	
Trinity	1,437		746		436	
Tulare						
Tuolumne	1,320	6,600	400	2,000	300	
Yolo						
Yuba	6,828	68,280	4,480	18,920	6,420	12,840
Totals	99,057	\$290,360	57,741	\$96,920	98,085	\$49,165

TABLE OF STATISTICS—Continued.

IMPROVEMENTS.								
GRIST MILLS.								
COUNTIES.	Number,	Steam Power	Run of Stone....	Value of Steam Mills.....	Water Power	Run of Stone.....	Value of Water Power Mills.....	Bushels of Grain Ground,
Alameda								
Amador								
Butte	4	1		\$10,000	3	7	\$100,000	
Calaveras								
Colusa	1	1	2					
Contra Costa								
Del Norte								
El Dorado	2				2	4	3,000	18,200
Fresno								
Humboldt	4	2	2	8,000	2	2	3,000	10,000
Klamath								
Lake								
Los Angeles								
Marin								
Mariposa								
Mendocino								
Merced	4				4	8	9,000	29,000

TABLE OF STATISTICS—Continued.

COUNTIES.	IMPROVEMENTS—Continued.					
	SAW MILLS.					
	Number.....	Value.....	Steam Power	Water Power	Number of feet of Lumber sawed..	Shingles.....
Alameda.....	.....	.....	.....	.....	.....	.....
Amador.....	19	\$48,000	11	8	5,180,000	.....
Butte	12	20,600	7	5	.....	.....
Calaveras	2	.....	1	1	.....	.....
Colusa .....	.....	.....	.....	.....	.....	.....
Contra Costa.....	1	.....	.....	.....	.....	.....
Del Norte	36	.....	24	12	30,000 18,900,000	.....
El Dorado.....	.....	.....	.....	.....	.....	.....
Fresno.....	7	.....	4	3	8,000,000	3,000,000
Humboldt.....	.....	.....	.....	.....	.....	.....
Klamath.....	.....	.....	.....	.....	.....	.....
Lake .....	.....	.....	.....	.....	.....	.....
Los Angeles .....	.....	.....	.....	.....	.....	.....
Marin.....	2	.....	2	.....	11,705,500	.....
Mariposa.	10	50,000	10	.....	16,000,000	255,000
Mendocino .....	.....	.....	.....	.....	.....	.....
Merced .....	.....	.....	.....	.....	.....	.....

Mono .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Monterey.....	1	.....	.....	.....	.....	1	.....	.....	.....
Napa.....	4	.....	.....	2	.....	2	.....	.....	.....
Nevada.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Placer.....	16	.....	.....	7	.....	9	.....	7,950,000	.....
Plumas.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sacramento.....	1	.....	4,000	1	.....	.....	.....	600,000	.....
San Bernardino .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Francisco.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Joaquin .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Luis Obispo.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Mateo.....	6	.....	.....	.....	.....	.....	.....	4,500,000	18,000,000
Santa Barbara .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Santa Clara.....	10	.....	.....	.....	.....	7	.....	9,500,000	.....
Santa Cruz	13	.....	.....	6	.....	7	.....	2,500,000	1,000,000
Shasta.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sierra.....	22	.....	.....	.....	.....	.....	.....	7,000,000	.....
Siskiyou.....	12	.....	36,000	1	.....	11	.....	.....	.....
Solano.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sonoma.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stanislaus .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sutter.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tehama.....	1	.....	.....	.....	.....	.....	.....	300,000	.....
Trinity.....	6	.....	.....	.....	.....	6	.....	.....	630,000
Tulare.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuolumne	14	.....	.....	7	.....	7	.....	4,750,000	.....
Yolo .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yuba	23	.....	.....	17	.....	6	.....	14,820,000	82,000
Totals	218	.....	\$158,600	109	.....	86	.....	111,735,500	229,967,000

TABLE OF STATISTICS—Continued.

COUNTIES.	IMPROVEMENTS—Continued.									
	TURNPIKE ROADS.						RAILROADS.			
	Number.	Miles in Length...	Cost.....	Income.	Cost of Repairs...	Number.....	Miles in Length...	Cost.....	Income.....	
Alameda.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amador.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butte.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Calaveras.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Colusa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Contra Costa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Del Norte.....	1	50	\$50,000	.....	.....	.....	.....	.....	.....
El Dorado.....	17	125	.....	.....	.....	.....	.....	.....	.....
Fresno.....	.....	.....	.....	.....	.....	1	2½	\$20,000	.....
Humboldt.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Klamath.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marin.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mariposa.....	4	20	40,000	\$7,000	\$2,000	1	4	50,000	.....
Mendocino.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merced.....	1	.....	1,500	.....	.....	.....	.....	.....	.....

TABLE OF STATISTICS—Continued-

COUNTIES.	HORTICULTURAL PRODUCTS.—NUMBER OF TREES AND VINES.							
	Apple.....	Peach.....	Pear.....	Plum.....	Cherry.....	Nectarine	Quince.....	Apricot.....
Alameda .....	.....	.....	.....	.....	.....	.....	.....	.....
Amador .....	.....	.....	.....	.....	.....	.....	.....	.....
Butte	20,000	150,000	7,000	2,000	1,000	6,500	350	3,128
Calaveras	29,844	22,181	5,480	2,887	1,179	.....	.....	1,377
Colusa.....	17,300	31,280	2,640	2,400	2,360	1,230	85	791
Contra Costa.....	.....	.....	.....	.....	.....	.....	.....	.....
Del Norte.....	2,000	100	1,000	200	300	.....	10	10
El Dorado.....	8,100	44,310	9,700	5,990	1,495	874	1,41	1,30
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt.....	26,719	1,076	626	1,229	415	.....	18	40
Klamath .....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....	.....	.....
Marin.....	3,550	932	363	402	150	.....	350	146
Mariposa.....	400	14,000	500	1,700	205	382	110	275
Mendocino .....	.....	.....	.....	.....	.....	.....	.....	.....
Merced	4,480	5,200	1,853	325	90	130	52	195

TABLE OF STATISTICS—Continued.

HORTICULTURAL PRODUCTS.—NUMBER OF TREES AND VINES—Continued.

COUNTIES.	Fig.....	Aloe	Citron.....	Lemon.....	Orange	Olive.....	Pomegranate.....	Pine Apple.....	Prune.....	Persimmon.....	Pecan.....	Cherimoya.....	Almond.....	Walnut.....
Alameda .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amador .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butte.....	1,118	.....	.....	100	75	.....	.....	.....	.....	.....	.....	.....	195	.....
Calaveras .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	297	.....
Colusa.....	125	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Contra Costa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Del Norte.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	10
El Dorado	455	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	465	.....
Fresno .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Klamath .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marin	75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mariposa	175	.....	.....	.....	.....	.....	28	.....	.....	.....	.....	.....	39	.....
Mendocino .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merced.....	157	.....	.....	.....	5	.....	8	.....	.....	.....	.....	.....	15	7

TABLE OF STATISTICS—Continued.

HORTICULTURAL PRODUCTS.—NUMBER OF TREES AND VINES—Continued.										
COUNTIES.	Filbert.....	Gooseberry.....	Raspberry.....	Strawberry.....	Grape.....	Tons of Grapes.....	Gallons of Wine.....	Gallons of Brandy.....	Value of Fruit.....	
Alameda	
Amador.....	
Butte.....	2,085	2,200	400,000	325,000	205	1,025	.....	.....
Calaveras.....	362,463	.....	.....	.....	.....
Colusa	88	.....	.....	48,469	.....	.....	.....	.....
Contra Costa.....	
Del Norte.....	1,000	5,000	.....	.....	.....	.....	.....	.....
El Dorado	794,535	.....	.....	.....	.....
Fresno	
Humboldt.....	6,856	3,402	15,800	313	.....	.....	.....	\$2,785	
Klamath.....	
Lake.....	
Los Angeles.....	
Marin.....	23,000	40	.....	.....	20,000	
Mariposa	150	3,500	100,000	18,000	195	15,500	700	20,000	
Mendocino.....	
Merced	150	62	2,856	56,307	.....	.....	.....	10,000	

TABLE OF STATISTICS--Continued.

COUNTIES.	ASSESSED VALUE OF PROPERTY.					INCREASE OR DECREASE IN VALUE OF PROPERTY.	
	Real Estate.....	Improvements...	Personal Prop-erty.....	Total Valuation of Property...	Assessed value of Property for 1862.....	Increase.....	Decrease.....
Alameda*.....	\$2,783,484	.....	\$1,020,756	\$3,804,240	\$4,100,000	.....	\$295,760
Amador*.....	1,256,549	.....	1,142,434	2,398,983	2,187,708	\$211,275	.....
Butte.....	1,771,065	.....	1,768,549	3,539,614	2,950,551	589,063	.....
Calaveras.....	1,171,489	.....	1,279,379	2,450,868	5,248,624	.....	2,797,756
Colusa.....	.....	.....	.....	2,693,875	2,643,809	.....	49,934
Contra Costa*.....	1,018,730	.....	723,762	1,742,492	1,840,000	.....	97,508
Del Norte.....	54,670	\$101,064	161,531	317,265	300,435	16,830	.....
El Dorado.....	436,015	1,264,655	1,604,110	3,304,780	3,864,449	.....	559,669
Fresno*.....	245,569	.....	557,924	803,493	962,985	.....	59,492
Humboldt.....	283,645	271,090	570,965	1,125,700	1,352,790	.....	227,090
Klamath*.....	96,090	.....	128,620	224,620	291,645	.....	67,025
Lake*.....	89,755	.....	160,894	250,649	313,246	.....	62,597
Los Angeles*.....	742,881	.....	879,489	1,623,370	3,065,330	.....	1,441,960
Marin.....	1,098,083	.....	637,086	1,735,169	1,817,553	.....	82,384
Mariposa.....	150,000	556,530	733,312	1,439,842	1,536,330	.....	96,488
Mendocino*.....	.....	.....	.....	1,161,773	1,165,502	.....	3,729
Merced.....	312,178	531,178	.....	843,356	966,221	.....	122,865
Mono*.....	325,890	.....	206,060	531,950	310,896	221,054	.....
Monterey.....	399,060	185,460	810,540	1,395,060	1,297,422	97,638	.....
Napa.....	1,689,307	835,923	.....	2,524,930	2,937,760	.....	412,830

Nevada*	2,146,995	.....	1,513,618	3,660,613	5,055,370	.....	1,394,757
Placer	601,228	624,833	1,845,851	3,071,912	3,225,248	.....	153,336
Plumas*	81,066	.....	1,121,422	1,202,488	1,070,000	132,488	.....
Sacramento	5,043,650	705,445	3,826,300	9,575,395	8,820,018	755,377	.....
San Bernardino*	158,800	.....	211,988	370,788	417,238	.....	46,450
San Diego	.....	.....	.....	431,989	471,806	.....	39,817
San Francisco	43,135,307	.....	20,920,043	64,055,350	66,531,207	.....	2,475,857
San Joaquin	2,932,508	17,625	2,042,359	4,992,492	4,670,194	322,298	.....
San Luis Obispo	130,806	80,000	402,876	613,686	512,742	100,944	.....
San Mateo	1,719,950	32,260	551,028	2,302,938	2,165,366	137,572	.....
Santa Barbara	107,000	.....	333,000	740,000	819,405	.....	79,405
Santa Clara	2,650,145	1,503,150	1,975,717	6,129,012	6,038,375	90,637	.....
Santa Cruz	671,964	.....	386,708	1,058,672	1,086,918	.....	28,246
Shasta*	408,439	.....	680,263	1,088,702	1,364,998	.....	276,296
Sierra	1,100,285	.....	1,424,121	2,524,406	1,159,205	1,365,201	.....
Siskiyou	514,760	.....	983,432	1,498,192	1,653,000	.....	154,808
Solano*	2,148,264	.....	1,547,779	3,696,043	3,601,171	94,872	.....
Sonoma*	2,049,095	.....	1,628,921	3,678,016	3,990,677	.....	312,661
Stanislaus	275,395	45,286	442,531	763,212	768,058	.....	4,846
Sutter	705,395	352,680	855,419	1,913,759	1,946,076	.....	32,317
Tehama	354,472	315,072	883,074	1,552,398	2,013,749	.....	461,351
Trinity	.....	322,506	539,622	861,128	1,166,414	.....	305,286
Tulare*	308,981	.....	1,077,435	1,085,982	1,266,488	.....	180,506
Tuolumne	766,592	143,125	957,325	1,867,042	2,742,450	.....	875,408
Yolo*	.....	.....	.....	2,458,067	2,322,975	135,092	.....
Yuba	1,062,862	1,427,805	1,994,525	4,485,192	6,187,773	.....	1,702,581
Totals	.....	.....	.....	.....	.....	\$4,270,341	\$15,001,015
Total Decrease	.....	.....	.....	.....	.....	.....	4,270,341
	.....	.....	.....	.....	.....	.....	\$10,530,674

* No report received; figures taken from reports to the Controller.

APPENDIX.

REPORTS OF COUNTY SURVEYORS.

MARIN COUNTY.

A. D. EASKOOT.....County Surveyor.

COUNTY SURVEYOR'S OFFICE,
San Rafael, October 24th, 1863. }

Hon. J. F. HOUGHTON,
Surveyor-General:

DEAR SIR:—In compliance with my duties and instructions from your office, I herewith transmit my annual report.

SCHOOL LANDS TAKEN IN LIEU OF THE SIXTEENTH AND THIRTY-SIXTH SECTIONS.

The number of acres taken as the sixteenth and thirty-sixth sections, or in lieu thereof, is about seventeen thousand seven hundred. This large sale of land has been on account of the rejection of the Balsa de Tomales Ranch. The following are the surveys made upon said grant:

Survey No. 8—Surveyed for ——— Breeze; Section Thirty, south half; Township Five north, Range Nine west—containing three hundred and twenty acres.

Survey No. 9—Surveyed for John Keyes; Section Thirty-Six, north half of north-east quarter—Section Twenty-Five, south half of south-east quarter; Township Five north, Range Ten west—containing one hundred and sixty acres.

Survey No. 10—Surveyed for George Keys; Section Thirty, east half of north-east quarter—Section Twenty-Nine, west half of north-west quarter; Township Five north, Range Nine west—containing one hundred and sixty acres.

Survey No. 11—Surveyed for Warren Dutton; Section Twenty-Five, north half of south-east quarter, south half of north-east quarter, north-east quarter-quarter—Section Twenty-Four, south-east quarter-quarter; Township Five north, Range Ten west—containing two hundred and forty acres.

Survey No. 12—Surveyed for Joel Harvey; Section Twenty-Two, west half of south-east quarter and east half of south-west quarter; Township Five north, Range Nine west—containing one hundred and sixty acres.

Survey No. 13—Surveyed for L. A. Harvey; Section Twenty-Three, west half of south-west quarter—Section Twenty-Two, east half of south-east quarter; Township Five north, Range Nine west—containing one hundred and sixty acres.

Survey No. 14—Surveyed for L. B. Harvey; Section Twenty-Seven, west half of north-east quarter, east half of north-west quarter, north-east quarter of south-west quarter, and north-west quarter of south-east quarter; Township Five north, Range Nine west—containing two hundred and forty acres.

Survey No. 15—Surveyed for H. P. McCleave; Section Twenty-Seven, east half of north-east quarter, and east half of south-east quarter—Section Twenty-Six, west half of north-west quarter, and north-west quarter of south-west quarter; Township Five north, Range Nine west—containing two hundred and eighty acres.

Survey No. 16—Surveyed for Jacob Jacommy; Section Thirty-Five, east half of south-west quarter, and west half of south-east quarter; Township Four north, Range Nine west—Section Two, north-east quarter of north-west quarter, and north-west quarter of north-east quarter; Township Five north, Range Nine west—containing two hundred and forty acres.

Survey No. 17—Surveyed for Antonio Jacohimeny; Section Thirty, west half of south-west quarter, and fractional south-west quarter of north-west quarter; Township Five north, Range Nine west—containing one hundred and one acres.

Survey No. 18—Surveyed for Mareck. Therres; Section Thirty-Five, fractional north-east quarter—Section Twenty-Six, south-west quarter of south-east quarter and fractional south-east quarter-quarter; Township Five north, Range Nine west—containing two hundred and twenty-eight and thirty-six one hundredths acres.

Survey No. 19—Surveyed for John De Martinia; Section Thirty-Five, west half of south-west quarter—Section Thirty-Four, east half of south-east quarter and south-west quarter of south-east quarter; Township Five north, Range Nine west—containing two hundred acres.

Survey No. 20—Surveyed for Lazan and Dennis Pare; Section Thirty-Five, north-west quarter and the west half of the north-east quarter; Township Five north, Range Ten west—containing two hundred and forty acres.

Survey No. 21—Surveyed for Thomas Porter; Sections Three and Thirty-Four—south-east quarter of south-west quarter of Section Thirty-Four, Township Five north, Range Ten west—north half of north-east quarter of Section Three, Township Four north, Range Ten west—fractional north-west quarter of north-west quarter of Section Three—fractional south-west quarter of north-west quarter of Section Three—fractional south-west quarter of Section Three—fractional south-east quarter of the north-west quarter of Section Three—fractional north-east quarter of south-west quarter of Section Three; Townships Four and Five north, Range Ten west—containing two hundred and thirteen and ninety-nine one hundredths acres.

Survey No. 22—Surveyed for Franklin Mauck; Section Thirty-Four, south-east quarter and north-east quarter of south-west quarter and fractional west half of south-west quarter; Township Five north, Range

Ten west—containing two hundred and forty-four and seventy-six one hundredths acres.

Survey No. 23—Surveyed for Robert J. Preston ; Sections Two, Three, and Eleven, fractional north-east quarter of south-east quarter of Section Three—south-east quarter of north-east quarter of Section Three—south half of north-west quarter of Section Two—fractional south-west quarter of Section Two—fractional north-west quarter of south-east quarter of Section Two—fraction in Section Eleven ; Township Four north, Range Ten west—containing two hundred and ninety-seven and four one hundredths acres.

Survey No. 24—Surveyed for James M. Preston ; Sections Two, Three, and Thirty-Five, north-west quarter of south-east quarter and the south-west quarter of Section Thirty-Five—west half of the north-west quarter of Section Two—north-east quarter of the north-east quarter of Section Three ; Townships Four and Five north, Range Ten west—containing three hundred and twenty acres.

Survey No. 25—Surveyed for Richard M. Preston ; Sections One, Two, Thirty-Five, and Thirty-Six, fractional north-west quarter of the north-west quarter of Section One—fractional north-east quarter of Section Two—south half of the south-east quarter of Section Thirty-Five—fractional south-west quarter of the south-west quarter of Section Thirty-Six ; Townships Four and Five north—containing two hundred and twenty-two and eighty-five one hundredths acres.

Survey No. 26—Surveyed for Edward Finster ; Sections Thirty-Five and Thirty-Six, west half of the north-west quarter, and the fractional north-west quarter of the south-west quarter of Section Thirty-Six—east half of the north-east quarter and the north-east quarter of the south-east quarter of Section Thirty-Five ; Township Five north, Range Ten west—containing two hundred and twenty-eight and sixty-eight one hundredths acres.

Survey No. 27—Surveyed for Ralph Smith ; Sections Thirty-Three, Thirty-Four, and Twenty-Eight, fractional south-east quarter of the south-west quarter of Section Twenty-Eight, fractional north-east quarter and the north-east quarter of the north-west quarter of Section Thirty-Three, the west half and the south-east quarter of the north-west quarter of Section Thirty-Four ; Township Five north, Range Ten west—containing three hundred and eighteen and seven one-hundredths acres.

Survey No. 28—Surveyed for Edward Clark ; Section Nineteen, north-west quarter ; Township Five north, Range Nine west—containing one hundred and sixty acres.

Survey No. 29—Surveyed for William McGreevy ; Section Twenty-seven, west half of the north-east quarter, east half of the north-west quarter, and the north-west quarter of the north-west quarter of Section Twenty-Seven ; Township Five north, Range Ten west—containing two hundred acres.

Survey No. 30—Surveyed for Westbrook A. Knight ; Section Twenty-Seven, west half of the south-east quarter, and the east half of the south-west quarter ; Township Five north, Range Ten west—containing one hundred and sixty acres.

Survey No. 31—Surveyed for George Dillon ; Sections Twenty-Seven and Twenty-Eight, north-east quarter of Section Twenty-Eight—north half of the south-east quarter of Section Twenty-Eight—south-west quarter of the north-west quarter and the north-west quarter of the

south-west quarter of Section Twenty-Seven; Township Five north, Range Ten west—containing three hundred and twenty acres.

Survey No. 32.—Surveyed for Morgan Brians; Sections Two and Three, north-east quarter and east half of north-west quarter of Section Three—west half of north-west quarter of Section Two; Township Four north, Range Nine west—containing three hundred and twenty acres.

Survey No. 33.—Surveyed for James Marshall; Sections Thirty-Two and Thirty-Three, south half of north-east quarter, south-east quarter of north-west quarter, and north-east quarter of south-west quarter, and west half of south-east quarter of Section Thirty-Two—and north-west quarter of south-west quarter, and south-west quarter of north-west quarter of Section Thirty-Three; Township Five north, Range Nine west—containing three hundred and twenty acres.

Survey No. 34.—Surveyed for William Ford; Sections Thirty-Two, Thirty-Three, Thirty-Four, and Thirty-Five, south half of south-east quarter of Section Thirty-Two, south-west quarter-quarter of Section Thirty-Three; Township Four north, range Nine west. North-west quarter-quarter of Section Four—north half of north-east quarter of Section Five; Townships Four and Five north, Range Nine west—containing two hundred and forty acres.

Survey No. 35.—Surveyed for Thomas A. Thornby; Sections Four, Nine, and Thirty-Three, south-east quarter of south-west quarter (forty acres) of Section Thirty-Three, Township Five north, Range Nine west—east half of the north-west quarter, (eighty acres,) north-east quarter of the south-west quarter, (forty acres,) south-west quarter of the north-east quarter, (forty acres,) and the west half of the south-east quarter (eighty acres) of Section Four—fractional north-west quarter of the north-east quarter (twenty-six acres) of Section Nine; Townships Four and Five north, Range Nine west—containing three hundred and six acres.

Survey No. 36.—Surveyed for Nicholas Reynolds; Sections Four and Five, south-west quarter of the north-west quarter and fractional west half of the south-west quarter of Section Four—fractional south-east quarter and the south half of the north-east quarter of Section Five; Township Four north, Range Nine west—containing two hundred and seventy-one and sixteen one-hundredths acres.

Survey No. 37.—Surveyed for Nathaniel Fleubieri; Section Thirty-Four, south-west quarter of north-east quarter and south-east quarter of north-west quarter; Township Five north, Range Nine west—containing eighty acres.

Survey No. 38.—Surveyed for Thomas Cruthers; Section Thirty-three, south-east quarter of north-west quarter, north-east quarter of south-west quarter, north-west quarter of south-east quarter, and south-west quarter of north-east quarter; Township Five north, Range Nine west—containing one hundred and sixty acres.

Survey No. 39.—Surveyed for John James; Sections Twenty-Eight, Thirty-Two, and Thirty-Three—south-west quarter-quarter and south-west quarter of south-west quarter of south-east quarter, Section Twenty-Eight; north-east quarter-quarter, Section Thirty-Two—north half of north-west quarter, and north-west quarter of north-east quarter, Section Thirty-Three; Township Five north, Range Nine west—containing two hundred and forty acres.

Survey No. 40.—Surveyed for William Young; Sections Twenty-Eight and Twenty-Nine, south-east quarter of Section Twenty-Nine, and north-west quarter of south-west quarter of Section Twenty-Eight; Township Five north, Range Nine West—containing two hundred acres.

Survey No. 41—Surveyed for Henry Richards; Section Twenty-Eight, east half of north-west quarter, and west half of north-east quarter, and north-east quarter of south-west quarter, and north-west quarter of south-east quarter; Township Five north, Range Nine west—containing two hundred and forty acres.

Survey No. 42—Surveyed for S. W. Preble; Sections Twenty-Seven and Twenty-Eight, south-west quarter of north-west quarter, and north-west quarter of south-west quarter of Section Twenty-Seven—south-east quarter of north-east quarter, and north-east quarter of south-east quarter of Section Twenty-Eight; Township Five north, Range Nine west—containing one hundred and sixty acres.

Survey No. 43—Surveyed for John O'Neil; Sections Twenty-Seven and Thirty-Four, west half of north-east quarter, and north-east quarter of south-west quarter of Section Thirty-Four—south-west quarter of south-east quarter, and south-east quarter of south-west quarter of Section Twenty-Seven; Township Five north, Range Ten west—containing two hundred acres.

Survey No. 44—Surveyed for Patrick McGreevy; Sections Twenty-Six and Twenty-Seven, north-west quarter of Section Twenty-Six—east half of north-west quarter of Section Twenty-Seven; Township Five north, Range Ten west—containing two hundred and forty acres.

Survey No. 45—Surveyed for Joseph Agussa; Sections Twenty-Seven and Twenty-Eight, south-west quarter of south-west quarter of Section Twenty-Seven—and the south half of south-east quarter of Section Twenty-Eight; Township Five north, Range Ten west—containing one hundred and twenty acres.

Survey No. 46—Surveyed for Guy M. Wood; Section Twenty-Two, north-west quarter and south-west quarter of Section Twenty-Two; Township Five north, Range Ten west—containing three hundred and twenty acres.

Survey No. 47—Surveyed for Geo. G. Williams; Sections Fifteen, Sixteen, and Twenty-One, fractional south-west quarter of south-west quarter of Section Fifteen—fractional south-east quarter of south-east quarter of Section Sixteen—fractional north-east quarter of north-east quarter of Section Twenty-One; Township Five north, Range Ten west—containing seventy-two and eighty-nine one hundredths acres.

Survey No. 48—Surveyed for H. M. Stemple; Sections Fifteen and Twenty-Two, fractional south-west quarter of south-east quarter, and fractional south-east quarter of south-west quarter of Section Fifteen—north-east quarter of Section Twenty-two; Township Five north, Range Ten west—containing two hundred and seventy-two and sixty-three one hundredths acres.

Survey No. 49—Surveyed for U. Minear; Sections Fourteen, Twenty-Three, and Fifteen, fractional south half of south-west quarter of Section Fourteen—fractional south-east quarter of south-east quarter of Section Fifteen—north-west quarter, and north half of south-west quarter of Section Twenty-Three; Township Five north, Range Ten west—containing three hundred and eleven and seventy-eight one hundredths acres.

Survey No. 50—Surveyed for Joseph Willson; Sections Twenty-Seven, Twenty-Eight, Thirty-Three, and Thirty-Four, south-west quarter-quarter Section Twenty-Seven—south-east quarter-quarter Section Twenty-Eight—north-east quarter-quarter Section Thirty-Three—northwest quarter-quarter Section Thirty-Four; Township Five north, Range Nine west—containing one hundred and sixty acres.

Survey No. 51—Surveyed for Robert Perry; Sections Twenty-Seven and Thirty-Four, south-east quarter of south-west quarter, and south-west quarter of south-east quarter of Section Twenty-seven—north-east quarter of North-west quarter, and north-west quarter of north-east quarter of Section Thirty-Four; Township Five north, Range Nine west—containing one hundred and sixty acres.

Survey No. 52—Surveyed for A. C. Buffinton; Sections Twenty-Six, Thirty-Four and Thirty-Five, south half of south quarter of Section Twenty-Six—east half of north-east quarter of Section Thirty-Four, and north-west quarter Section Thirty-Five; Township Five north, Range Nine west—containing three hundred and twenty acres.

Survey No. 53—Surveyed for Robert Moore; Section Twenty-Six, south-east quarter of north-west quarter, north-east quarter of south-west quarter, fractional south-west quarter of north-east quarter, fractional north-east quarter of south-east quarter, north-west quarter of south-east quarter; Township Five north, Range Nine west—containing one hundred and sixty-two and forty-two one hundredths acres.

Survey No. 54—Surveyed for Francis E. Brady; Section Twenty-Five, north-east quarter of the south-west quarter; Township Five north, Range Ten west—containing forty acres.

Survey No. 55—Surveyed for Nathaniel Jacominy; Sections Three, Four, Nine and Ten, fractional north west quarter of north-west quarter (fifteen and eighty-five one hundredths acres) of Section Ten—south-west quarter of north-west quarter (forty acres)—and the west half of south-west quarter of Section Three—south-east quarter of north-east quarter, (forty acres,) and the fractional east half of south-east quarter, (eighty-three and fifty-five one hundredths acres); Township Four north, Range Nine west—containing two hundred and fifty-nine and forty one hundredths acres.

Survey No. 56—Surveyed for C. E. Colburn; Section Twenty-three, fractional north-west quarter; Township Five north, Range Nine west—containing one hundred and thirty and eighty-eight one hundredths acres.

Survey No. 57—Surveyed for George Zimmerman; Sections Twenty-Six, Twenty-Seven and Thirty-Four, west half of south-west quarter of Section Twenty-Six—east half of south-east quarter of Section Twenty-Seven, and the east half of the north-east quarter of Section Thirty-Four; Township Five north, Range Ten west—containing two hundred and forty acres.

Survey No. 58—Surveyed for Benjamin Rimes; Sections Twenty-One, Twenty-Two, Twenty-Seven and Twenty-Eight, south-east quarter-quarter Section Twenty-One—south-west quarter-quarter Section Twenty-Two—north-west quarter-quarter Section Twenty-Seven—north-east quarter-quarter Section Twenty-Eight; Township Five north, Range Nine west—containing one hundred and sixty acres.

Survey No. 59—Surveyed for M. Osborn; Section Twenty-One, south-west quarter and west half of south-east quarter, and north-east quarter of south-east quarter; Township Five north, Range Nine West—containing two hundred and eighty acres.

Survey No. 60—Surveyed for George G. Williams; Section Sixteen, fractional south-east quarter of the south-east quarter, (twenty-three and sixty-two one hundredths acres); Township Five north, Range Ten west—containing twenty-three and sixty-two one hundredths acres.

Survey No. 61—Surveyed for William Rowland; Sections Sixteen and Twenty-One, fractional south-west quarter of Section Sixteen—fractional

east half of north-west quarter—the south-west quarter of north-west quarter—fractional north half of south-west quarter—fractional south-west quarter of north-east quarter, and the north-west quarter of south-east quarter of Section Twenty-One; Township Five north, Range Ten west—containing three hundred and four and eighty-five one hundredths acres.

Survey No. 62—Surveyed for John W. Batman; Sections Twenty and Twenty-One, fractional east half of north-east quarter Section Twenty—north-west quarter of north-west quarter Section Twenty-One; Township Five north, Range Ten west—containing seventy-seven and fifty-eight one hundredths acres.

Survey No. 63—Surveyed for Thomas Beggs; Section Twenty-Six, south-east quarter and the south-east quarter of south-west quarter; Township Five north, Range Ten west—containing two hundred acres.

Survey No. 64—Surveyed for John Buchanan; Section Twenty-five, south-west quarter; Township Five north, Range Ten west—containing one hundred and sixty acres.

Survey No. 65—Surveyed for Benjamin Williams; Section Twenty-Six, north-east quarter of south-west quarter; Township Five north, Range Ten west—containing forty acres.

Survey No. 66—Surveyed for Thomas J. Ables; Sections Twenty-Three and Twenty-Six, south half of south-west quarter of Section Twenty-Three—north half of north-west quarter of Section Twenty-Six; Township Five north, Range Ten west—containing one hundred and sixty acres.

Survey No. 67—Surveyed for Benjamin Ables; Sections Twenty-Two and Twenty-Seven, south-east quarter of Section Twenty-Two—north-east quarter of north-east quarter of Section Twenty-Seven; Township Five north, Range Ten west—containing two hundred acres.

Survey No. 68—Surveyed for John Barry; Section Twenty-Four, south half of south-west quarter; Township Five north, Range Ten west—containing eighty acres.

Survey No. 69—Surveyed for J. J. Coe; Sections Twenty-One and Twenty-Eight, fractional south-east quarter of north-east quarter, the south-east quarter and fractional south-east quarter of south-west quarter of Section Twenty-One—fractional north-east quarter of north-west quarter, and the north-west quarter of north-east quarter of Section Twenty-Eight; Township Five north, Range Ten west—containing three hundred and ten and fifteen one-hundredths acres:

Survey No. 70—Surveyed for Alfred Helmes; Section Twenty-Seven, north-west quarter of the north-west quarter; Township Five north, Range Ten west—containing forty acres.

Survey No. 71—Surveyed for William Rowland; Section Sixteen, fractional south half of the south-west quarter; Township Five north, Range Ten west—containing forty-two and eleven one-hundredths acres.

Survey No. 72—Surveyed for Abraham Stines; Sections Twenty-Eight and Twenty-Nine, east half of north-east quarter of Section Twenty-Nine—east half of north-west quarter of Section Twenty-Eight; Township Five north, Range Nine west—containing one hundred and sixty acres.

Survey No. 73—Surveyed for John Bloom; Sections Thirty-Five, Two, and One, east half of south-east quarter of Section Thirty-Five, Township Four north, Range Nine west; east half of north-east quarter of Section Two—west half of north-west quarter of Section One;

Township Five north, Range Nine west—containing two hundred and forty acres.

Survey No. 74—Surveyed for Robert Baely; Sections Thirteen and Twenty-Four—fractional south-east quarter of south-east quarter (eleven and fourteen one-hundredths acres,) of Section Thirteen—fractional north-east quarter (one hundred and fifty-one and eighty-six one-hundredths) of Section Fourteen—north half of the south-east quarter, (eighty acres,) and fractional east half of the north-west quarter (sixty-six and seventy-three one-hundredths acres,) of Section Fourteen; Township Five north, Range Ten west—containing three hundred and nine and seventy-three one-hundredths acres.

Survey No. 75—Surveyed for Isaac McKenzie; Sections Thirteen, Fourteen, Twenty-Three, and Twenty-four, fractional south-west quarter of south-west quarter (six and thirty-five one-hundredths acres,) of Section Thirteen—fractional south-east quarter of south-east quarter (seven and eighteen one-hundredths acres,) of Section Fourteen—fractional east half of north-east quarter (twenty-five and four one-hundredths acres,) of Section Twenty-Three—south-west quarter of north-west quarter (forty acres,) and north half of south-west quarter (eighty acres,) of Section Twenty-Four; Township Five north, Range Ten west—containing one hundred and eighty-eight and thirty-one one-hundredths acres.

Survey No. 76—Surveyed for George Henry; Section Twenty-Three, fractional south-east quarter; Township Five north, Range Ten west—containing one hundred and fifty-three and eighty one-hundredths acres.

Survey No. 77—Surveyed for Amasa Morse; Sections Five and Eight, east half of north-west quarter, (eighty acres,) south-west quarter of north-west quarter, (forty acres,) and the fractional south-west quarter, (one hundred and fifteen and thirty-eight one-hundredths acres,) of Section Five—fractional north-west quarter, (fifty-six and twenty-two one-hundredths acres,) of Section Eight; Township Four north, Range Nine west—containing three hundred and one and twenty-five one-hundredths acres.

Survey No. 78—Surveyed for Abijah Woodworth; Sections Five and Six, fractional north-east quarter, (one hundred and fifty-two and forty-nine one-hundredths acres,) and fractional south-east quarter, (one hundred and eighteen and ninety-three one-hundredths acres,) of Section Six—north-west quarter of north-west quarter, (forty acres,) of Section Five; Township Four north, Range Nine west—containing three hundred and eleven and forty-two one-hundredths acres.

Survey No. 79—Surveyed for Joseph L. Leffingwell; Sections Thirty-One and Thirty-Two, north-east quarter of Section Thirty-One—south-west quarter of north-west quarter of Section Thirty-Two; Township Five north, Range Nine west—containing two hundred acres.

Survey No. 80—Surveyed for Lysander C. Woodworth; Sections Thirty-One and Thirty-Two, fractional south-east quarter, (one hundred and fifty-four and eighty-two one-hundredths acres,) of Section Thirty-One—west half of south-west quarter, (eighty acres,) and the south-east quarter of south-west quarter, (forty acres,) of Section Thirty-Two; Township Five north, Range Nine west—containing two hundred and seventy-four and eighty-two one-hundredths acres.

Survey No. 81—Surveyed for Joseph Leffingwell; Section Thirty-Two, north-east quarter of the north-west quarter; Township Five north, Range Nine west—containing forty acres.

Survey No. 82—Surveyed for Hiram J. Beck; Sections Six and Thirty-One, fractional south-west quarter, (one hundred and forty-four and forty-

two one-hundredths acres,) of Section Thirty-One—fractional north-west quarter, (forty-three and seventy-one one-hundredths acres,) of Section Six; Townships Four and Five north, Range Nine west—containing one hundred and eighty-eight and thirteen one-hundredths acres.

Survey No. 83—Surveyed for Richard M. Preston: Section Thirty-Six, fractional south-west quarter of the south-west quarter; Township Five north, Range Ten west—containing thirteen and eighty-five one-hundredths acres.

Survey No. 84—Surveyed for Edward F. Brady; Section Thirty-Six, fractional south-west quarter of the north-east quarter; Township Five north, Range Ten west—containing eleven and fourteen one-hundredths acres.

Survey No. 85—Surveyed for Alfred Helms; Section Twenty-Eight, fractional south-east quarter of the north-west quarter, (nineteen acres,) and fractional north-east quarter of the south-west quarter, (seventeen acres,) of Section Twenty-Eight; Township Five north, Range Ten west—containing thirty-six acres.

Survey No. 86—Surveyed for Andrew Fisher; Section Twenty-Eight, east half of south-west quarter; Township Five north, Range Nine west—containing eighty acres.

Survey No. 87—Surveyed for John Berry; Section Twenty-Four, north half of the south-west quarter; Township Five north, Range Nine west—containing eighty acres.

Survey No. 88—Surveyed for Lewis D. Martinya; Sections Thirty-Three, Thirty-Four, Three, and Four, south half of south-east quarter, and north-east quarter of south-east quarter of Section Thirty-Three—south-west quarter-quarter of Section Thirty-Four; Township Four North, Range Nine west—north half of north-east quarter of Section Four—north-west quarter-quarter of Section Three; Townships Four and Five north, Range Nine west—containing two hundred and eighty acres.

Survey No. 89—Surveyed for Thomas Casey; Section Three, east half of south-west quarter, west half of south-east quarter, and north-east quarter of south-east quarter; Township Four north, Range Nine west containing two hundred acres.

Survey No. 90—Surveyed for Lefevre Goubbron; Section Thirty-Six, north-west quarter; Township Five north, Range Ten west—containing one hundred and sixty acres.

Survey No. 91—Surveyed for Joseph Agusse; Sections Twenty-Seven, Twenty-Eight, and Thirty-Four, south-west quarter of south-west quarter of Section Twenty-seven—south half of south-east quarter and fractional south-east quarter of south-west quarter of Section Twenty-Eight—north-west quarter of the north-west quarter and the south-east quarter of north-west quarter of Section Thirty-Four; Township Five north, Range Ten west—containing two hundred and thirty-three acres.

Survey No. 92—Surveyed for Ralph Smith; Sections Thirty-Three and Thirty-Four, south-west quarter of north-west quarter of Section Thirty-Four—fractional north-west quarter and fractional south-west quarter of Section Thirty-Three; Township Five north, Range Ten west—containing three hundred and two and seventy-six one-hundredths acres. Base meridian of Mount Diablo.

SWAMP AND OVERFLOWED LANDS.

There has been only two surveys made of Swamp and Overflowed Lands in this county since my last annual report :

Survey No. 83—Surveyed for Peter Dolan ; being for the north-east quarter-quarter of Section Twenty-One ; Township One north, Range Six west—containing forty acres.

Survey No. 84—Surveyed for J. R. Sweetzer ; being for the south-west quarter of south-east quarter of Section Sixteen—west half of north-east quarter, south half of north-west quarter, east half of south-west quarter, and west half of south east quarter of Section Twenty-One ; Township Three north, Range Six west—containing three hundred and sixty acres ; being re-survey of Number Seventy.

All from the base and meridian of Mount Diablo.

TIDE LANDS.

Number of surveys of Tide Lands, two :

Survey No. 4—Surveyed for J. R. Preston ; being for the fractional east half of south-east quarter of Section Three, and fraction in the south-west quarter of south-west quarter of Section Two, and fraction in north-west quarter of north-west quarter of Section Eleven ; Township Four north, Range Ten west—containing fifteen and twenty-seven one-hundredths acres.

Survey No. 5—Surveyed for R. M. Preston ; being for the fraction in north-west quarter of south-east quarter of Section Two—a fraction in south-west quarter of south-east quarter of Section Two—a fraction in south-east quarter of south-west quarter of Section Two—and fraction in north-east quarter of north-east quarter and north-west quarter of north-east quarter of Section Eleven ; Township Four north, Range Ten west, Mount Diablo meridian—containing fifty-six and twelve one-hundredths acres.

MINERAL LANDS.

This county must soon be classed amongst the mining counties of this State. The great discoveries of copper and silver give indications of great mineral wealth yet to be developed. Some quartz lodes have been discovered which have assayed from four to forty per cent of copper, and about eight hundred dollars per ton of silver ; the most of these discoveries have been made near Tamal Pais Mountain and Novato Point.

TAXABLE PROPERTY.

The taxable property of this county amounts to one million seven hundred and thirty-five thousand one hundred and sixty-nine dollars. Total tax raised, thirty-nine thousand three hundred and ninety-two dollars.

All of which is most respectfully submitted.

Respectfully, your obedient servant,

A. D. EASKOOT,
County Surveyor of Marin County.

SUTTER COUNTY.

J. W. GAITHER.....County Surveyor.

OFFICE COUNTY SURVEYOR,	}
Sutter County, Nov. 10th, 1863.	

Hon. J. F. HOUGHTON,
Surveyor-General :

SIR :—In accordance with the law and your instructions, I transmit herewith the following report of work done in this office since October first, eighteen hundred and sixty-one.

SWAMP AND OVERFLOWED LAND SURVEYS.

Of this class of land I have made sixty-four surveys, numbering from two hundred and eighty-nine to three hundred and fifty-three, inclusive. A portion of them were re-surveys of old locations which had been relinquished—all of which have been forwarded to your office for approval.

SCHOOL LAND LOCATIONS.

I have made sixteen surveys of this class, including thirteen of sixteenth and thirty-sixth sections, and three of School Land Warrant locations—all of which have been transmitted to the State Locating Agent.

In consequence of the "great flood" of eighteen hundred and sixty-two, Swamp Lands had been in poor request until within the last three months, since which time, a decided improvement has taken place.

At this late date it is scarcely necessary to speak of the overflow of eighteen hundred and sixty-two, but I will state that about the ninth of January of that year, two thirds of the county was inundated by water, varying in depth from one inch to eighteen feet, and from eighteen to thirty feet above low water mark in the Sacramento and Feather Rivers. From a point near the centre of the county, it presented the appearance of a vast lake, with here and there a knoll or small island on which could be seen large numbers of domestic animals. A light deposit of sandy sediment was left on the submerged lands, from one to six inches deep, improving the same along the margins of Feather and Bear Rivers. Much of the most valuable land, was, however, covered with sand, from one to four feet deep, making much of it worthless for cultivation. Many changes were wrought in the vegetation of our county. In the point formed by the confluence of the Sacramento and Feather Rivers, covering a large area of land, and in many places along the edges of the tules, heavy crops of worthless kuckle burs take the places of luxuriant grasses, and in other places the salt and sour grasses have been superseded by those of a better quality ; showing that by means of irrigation and a good system of reclamation, much of the least valuable land in the county might be made the most productive. The raising of sheep, to fertilize our soil as well as for their meat and wool, has been too much neglected by our farmers, as well as discouraged by the Legislature in many counties, and I know of no branch of husbandry or of stock raising more deserving of the attention of the guardians of our State.

The road law of this county should be amended so as to comply with the provisions of an Act approved April seventeenth, eighteen hundred and sixty-three, (pages 317, 318,) for Santa Cruz County; also, the word *may* should be inserted in place of the word *shall*, in the first line of section six of an Act approved May ninth, eighteen hundred and sixty-one, (page 314,) for Sutter and Santa Cruz counties, thereby giving the Board of Supervisors greater discretion in the matter of locating roads, and, in many cases, saving the County financially.

There are other matters that might be communicated at this time, but as this paper has already become lengthy, I respectfully submit it as it is.

J. W. GAITHER,
County Surveyor, Sutter County.

REPORTS OF COUNTY ASSESSORS.

BUTTE COUNTY.

A. G. SIMPSON.....County Assessor.

COUNTY ASSESSOR'S OFFICE,
Oroville, Butte County, Cal., November 2d, 1863. }

Hon. J. F. HOUGHTON,
Surveyor-General :

SIR :—I herewith inclose statement of the agricultural and other statistics of Butte County, compiled from the assessment books for the year eighteen hundred and sixty-three, as also an abstract of the assessed value of real and personal property, with the amount of taxes for State and county purposes levied thereon.

Farmers, generally speaking, have reaped an average crop.

The several branches of industry in this county, to wit—agricultural, mercantile, and mining—appear to be in a prosperous condition.

The breed of stock is improving slowly, but steadily.

Fruit growing has increased during the present year, and the greater part of the finer fruits are of excellent flavor. I will here refer to the orchards of Messrs. Bidwell, Briggs, Hanshaw, Woolen, Gilkyson, and Durham. The facilities for the cultivation of the grape vine in this county in many localities are good, and some of the different classes of grapes are as fine as any raised in the State.

The mercantile business in this county is, I think, in a prosperous condition, though for some time past not so extensive as we could have wished. However, the trade with Oroville is slowly progressing, and as we have a railroad built within four miles of Oroville, which will soon connect Oroville with tide water, we have no doubt of future prosperity, and within a short period of time. Within the past year we have had considerable improvements made in our county in good and substantial buildings, the most of which have been made in the Towns of Oroville and Chico, and will, undoubtedly, within the coming year witness much more.

The principal seats of mining enterprise are at Thompson's Flat, Cher-

okee Flat, Wyandotte, and Bidwell's Bar; the two latter are mostly copper mining, some claims of which are prospecting very well, to wit: the Frost, the Occidental, the Bliss, and Live Oak, near Wyandotte. River mining is not carried on to such an extent as in former years. In quartz mining there are but few claims being worked, with but little success.

The number of miles of boundary necessary to be run in this county, at least prior to March first, eighteen hundred and sixty-four, I should say would be about thirty; the said lines to be run between the Counties of Butte and Colusa, and Butte and Sutter, there being much difficulty experienced by the Assessors of the several counties in making their assessments.

Of electro-magnetic telegraphs in this county, we have but one; its value is about five thousand dollars. It extends about fifty-four miles in length.

Of the timber in the county, the greater part is cedar and pine. Oak is to be found generally in the valley, but the lands are heavily timbered.

The assessment the present year is about the same as in eighteen hundred and sixty-two.

I am, Sir,

Yours, very respectfully,

A. G. SIMPSON,

Assessor of Butte County.

By J. BEAN, Deputy.

CALAVERAS COUNTY.

J. THOMPSON AND OTHERS.....Township Assessors.

ASSESSOR'S OFFICE, CALAVERAS COUNTY, }
November 21st, 1863.

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In compliance with law, we herewith beg to transmit to your office our annual report of statistics, etc., of Calaveras County.

AGRICULTURE, ETC.

This county, as heretofore advised by the several reports, is but a limited agricultural county, though the number of acres of land inclosed has greatly increased; still, the productions are not proportionately on the increase, the attention of our people being more generally devoted to procuring wood and timber lands. This will apply more especially to those lands lying higher up in the mountain belt, as they are destined soon to become a source of almost inexhaustible wealth to their possessors; as the timber is being cut from the lower lands, in some few instances, they are cultivated, and still further improved by the addition of substantial residences, gardens, and orchards, but in a majority of cases are abandoned to the more enterprising vine grower—yet, no doubt, to clothe our hills with verdure from the snow belt to the foothills.

Within the range of mountains passing through the eastern section of the county are many very fine grazing lands, upon which are large numbers of the cattle and sheep of the neighboring counties annually driven, to fatten them for the markets of the larger towns and cities below, and which must, as the county is more developed by opening up the several contemplated roads to the country east of the Nevada range, in course of time become very valuable, and the consequent source of considerable revenue to the State and county.

MINES AND MINING.

Our mining interests are still occupying the attention of much the larger part of our population; in fact, so great is the excitement produced by the discovery and development of our copper and silver lodes, that, as a consequence, a considerable portion of capital and labor, heretofore invested in agriculture, are now turned to mining, thus lessening the value of productions from that source.

Our copper mines, as they are becoming developed, prove the necessity of some investment of the surplus capital of some of our more favored citizens of San Francisco and elsewhere. To develop a copper mine, and make the production of ore remunerative to the owner, a large outlay is in most cases necessary. The lodes, or strikes, making through the county from the Stanislaus to the Mokelumne Rivers, thus far discovered, are among the richest of the world. The Union, Keystone, Napoleon, Copper Hill, Hog Hill, Campo Seco, Lancha Plana, Josephine, Collier, Camp, McNulty, and some few other companies, are already shipping large amounts of ore, varying from twelve to thirty per cent of metal. The daily production of ore from this county is already about one hundred tons—giving employment to a large number of men and teams for its transportation and shipment; which amount will soon be greatly increased from the shipment of ore from the San Domingo District, further to the east and more nearly the center of the county, which will send ore even better than much of that sent from the Copperopolis and Campo Seco districts.

Our silver mines, though doubtless very rich, are not as yet much developed. The great rush of prospectors for silver to more distant localities has drawn from Blue Mountain that attention which its prospects would seem to demand. Quite as good prospects are had from the lodes of this district as from most of those of more distant localities; all that is needed here, as in the copper mining districts, is the necessary capital from abroad to assist the hardy miner in his heavy undertaking—the opening up and successful working of a silver mine.

FRUIT TREES AND VINES.

Of the production of our orchards and vineyards but little can be said in addition to our report of last year. There has been a gradual increase in some and a falling off in others of the produce of the orchard, while the vines are annually increasing in number, and the wine made will soon be in quantities sufficient to give employment to the several transportation lines to the seaboard, while the quality of wine will bear favorable comparison with much that is brought from abroad.

TAXABLE PROPERTY.

Consequent upon the rush of people for the several silver mining districts east of the Nevadas, our assessment roll has not come up to that of last year, and we may look for a continuation of this decrease for perhaps another two years, when the natural reflux of the people, and the continued development of rich copper and silver lodes on this, the west side of the mountains, will tend to increase the amount of taxable property, and continue gradually till the time when "Old" Calaveras will rank among the rich counties of the State.

We have also somewhat reduced the number of horses and cattle, while a small increase is had in the number of sheep. Hogs have decreased in number, while the quality of both beef and pork is better than heretofore, from a more systematic mode of treatment.

All of which we respectfully submit.

Yours truly,

J. THOMPSON,
D. S. BATES,
D. S. LANE,
S. W. BRIGGS,
R. K. THORNE,
JOHN GILLILAND,

Township Assessors of Calaveras County.

COLUSA COUNTY.

H. W. BROWN,.....County Assessor.

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR :—Please find herewith the necessary report, as required by law.

Not having any blanks left from last year, I send in the present form. The report differs but little from last year. There are fewer cattle, but a few more horses and sheep. The value of cattle was less, making the total valuation a figure less than that of last year.

Very respectfully, yours,

H. W. BROWN,
County Assessor of Colusa County.

DEL NORTE COUNTY.

GEORGE W. RUSSELL,.....County Assessor.

Hon. J. F. HOUGHTON,
Surveyor-General:

Crescent City,
September 8, 1863. }

SIR:—Herewith, I submit my report as Assessor of Del Norte County, for the year eighteen hundred and sixty-three :

It is a matter of impossibility for me to obtain anything like a correct statement relating to the agricultural interests in our county, and I have returned the statement to you filled up with only such figures as could be relied upon.

The farming land in this county is confined to two small valleys, and they are cultivated to a small extent. The land cannot be excelled in the State, and is susceptible of the highest cultivation. We have vast forests of timber running through the county; redwood, white and yellow fir, hemlock, spruce, and pine, abound in great quantities, and are, in fact, inexhaustible, and I prophesy that, in two years time, Crescent City will be the heaviest lumber exporting port on the Pacific coast. The harbor of Crescent City is the only port of entry between San Francisco and the Columbia River that is susceptible of improvement, and a survey of the harbor has already been made by the Government, with the view of constructing a breakwater, and let this be completed, Crescent City will rank with the wealthy cities of the Pacific.

The most promising productive interests of Del Norte are its copper mines. Over thirty claims have been located, twenty of them incorporated, and in various stages of development. Up to this time, about five hundred tons of ore, averaging twenty-five per cent, has been shipped from this place, and, from present appearances, the amount of ore that will be sent forward the coming season will reach five thousand tons, with a certainty of doubling the amount every succeeding year.

The future of this little northwest corner of creation is a bright one. Business of all kinds looks better, all are encouraged, and none more so than

Your humble servant,

GEORGE W. RUSSELL,
Assessor of Del Norte County.

HUMBOLDT COUNTY.

R. WILEY.....County Assessor.

OFFICE COUNTY ASSESSOR,
Eureka, Sept. 21st, 1863. }

Hon. J. F. HOUGHTON,
Surveyor-General :

SIR:—Please find inclosed my report as County Assessor for the year eighteen hundred and sixty-three. The difficulties in gathering statis-

tics which would enable one to furnish a *correct* statement is sufficiently apparent to any person who has had any experience in the business, without any explanations whatever. But when to the ordinary difficulties incident to the office is added an unrelenting, devastating Indian war, that is carried to the very doors of our homes, I hope will be deemed a sufficient excuse for any shortcomings or imperfections which may appear in my report. In fact, to this war may be traced the various difficulties and defects which we are compelled to endure.

Our list of taxable property is over two hundred thousand dollars short of what it was last year. Our taxable inhabitants are one hundred short, and every department of our domestic relations have more or less been damaged by the same cause.

Since my last report whole neighborhoods in our county have been deserted; citizens who have bought their land from the United States, invested all their little means in building themselves up a *home*, and by untiring energy and industry have had everything that was requisite to make a home comfortable, have been compelled to give up everything—leaving their orchards laden with choice fruits, their fine fields of grain, their herds and flocks; yea, and alas! too often the father and husband have been left amid the ruins of what was once a peaceful and quiet home, but now to them a home no longer.

Our grazing interests are entirely destroyed, and our agricultural interests very considerably impaired, from the fact that when a man sows he has no assurance that he will ever be permitted to reap his harvest. There is now in this county quite a number of fine fields of grain that cannot be harvested with safety without an armed guard to protect the men while harvesting. Then our lumbering interests are impaired materially by the same cause. In fact, every department of society feels the oppression more or less. Yet notwithstanding all of our difficulties our march is "onward and upward;" improvements still go on. New farms are being opened all the time, new enterprises entered into, and new features in the natural resources of our county are being continually developed.

I think I can say of a truth, that in Humboldt County there is a greater combination of requisites for a good county than any part of our State, namely: Good soil, good timber, good water, good climate, and good health—with a harbor second to none in the State, save San Francisco, and entirely free from that bane of California, "Spanish grants." When a man buys land in this county he has *the* title from the General Government direct.

There is no way for me to arrive at the aggregate number of acres of timber, grazing, and agricultural lands, the greater portion of our county never having been surveyed.

Our county is about sixty miles in length along the coast, by about forty miles in width. There is a belt of redwoods that runs through our county from north to south, and parallel with the coast, about ten miles in width, leaving a strip of agricultural and grazing lands on the west, between that and the coast, on which the entire settlements of the county are at present located—the strip of open land lying to the eastward of the redwoods being entirely deserted and given up to the Indians, and which is as fine a grazing country as there is in the State.

The salmon fisheries of Eel River are second to none in the world for quantity, quality and facilities for taking them.

Some fine banks of coal have been discovered on Eel River the past

season, which at some future day will be an article of export from our bay.

With the assurance that I have done everything I could under the circumstances to make my report complete,

I am, sir, yours, most respectfully,

R. WILEY,
County Assessor.

MARIPOSA COUNTY.

GEORGE W. CORNELL.....County Assessor.

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR :—I have the honor to transmit to your office, in accordance with the requirements of law, my annual report as Assessor of Mariposa County, accompanied with which you will find a statistical report of all and such matters pertaining thereto.

Since my last annual report, I have the satisfaction of returning an increase in the taxable property of this county, and also in reporting a decided improvement in the productiveness in mining and agricultural pursuits of our citizens.

By a recent Act of the Legislature, our floating debt has been bonded, and our Supervisors, with commendable zeal, are endeavoring to make due preparation to meet the exigencies of the case, and doubtless, if *all* would promptly pay their taxes, it would liquidate the entire debt in a few years. You are aware that within our county lies the celebrated Las Mariposas estate. The parties controlling this estate have heretofore claimed that the property should only be assessed for the value of the improvements and a nominal value of the land; asserting that the hidden treasures contained in the land could not be a guide to assessment, as their value could not be known. The Supervisors have endeavored to assess the property at something like a moderate valuation, but all their efforts thus far have been vain, because of the chicanery and legal technicalities of parties interested. In every suit heretofore instituted by this county to recover taxes upon this estate, the Supervisors have been invariably beaten, and they have grown chary of expending money to coerce the owners of the estate to a compliance with the law. Such being the case, the taxes have fallen heavily upon the other tax payers of the county. But, could the parties now owning the estate be forced to give an assessment for anything like the value for which it has been recently sold, a sufficient revenue would soon be realized to discharge our county indebtedness and materially decrease the rate of taxation. This can be easily understood when the facts are stated—that heretofore the estate has been assessed at less than three hundred thousand dollars, yet recently the property has passed into the hands of a joint stock company with a nominal value of ten millions, the par value which is rated and realizing fifty per cent. This, then, by their own

showing, would bring the value of the estate to the amount of five millions. But, allowing a reasonable deduction from this amount, three millions of dollars would be a fair assessment of the estate. Could they be taxed upon that amount, the State as well as the county would receive dues out of which they have been defrauded heretofore.

For a description, geographically, of our county, I beg leave to refer you to my last annual report.

Since my last report, I am happy to be able to state that improvements have been progressive, and are of a permanent nature. We can boast of as good roads as any in the mountains, and bridges and ferries have been repaired since the flood of eighteen hundred and sixty-two, and are now in good order for travel.

We have six School Districts, all of which are supplied with Teachers. A manifest improvement is discernible in the interest taken by our citizens in Public Schools since my last report. Our population is becoming more settled, and the number of children is largely increasing, and our School Fund, judiciously managed, will give a good ratio to each scholar.

I beg to refer you to my last annual report for such other and further matters as in this would be a repetition.

I am, Sir, very respectfully, your obedient servant,

GEORGE W. CORNELL,
Assessor of Mariposa County.

MONTEREY COUNTY.

W. V. McGARVEY.....County Assessor.

SAN JUAN, Monterey County, }
October 3d, 1863. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—Inclosed please find my statistical report of this county for the year eighteen hundred and sixty-three. There has been some falling off in the number of stock cattle, as many have been driven out of the county on account of the scarcity of grass; and, also, our stock in horses has fallen off—a disease something like the blind staggers has killed many off in the last year. As to sheep, some considerable number have been driven out of the county, but yet the number is a few thousand more than last year.

We have a matanzas at Monterey, erected by San Jurjo, Bolado & Pujol, and superintended by Messrs. Leigh & Winter. They have been in operation since the first of May, and have been killing from sixty to one hundred head of cattle per day for hides and tallow. They have also killed a few sheep. Many of the cattle have been poor cattle, and, I might say, they were killing them to save their lives, as they would undoubtedly have died the coming winter, and were purchased at very low prices—from one dollar and a half to two dollars per head—which will explain to you the low value of the whole number of cattle slaughtered.

In the culture of tobacco, I can only say that but very few have as

yet tried it, and all have succeeded beyond their expectations. You may look for tobacco from here in a few years.

Very respectfully yours,

W. V. McGARVEY,
Assessor of Monterey County.

PLACER COUNTY.

RECORDER'S OFFICE,
Auburn, Placer County, November 17th, 1863. }

HON. J. F. HOUGHTON,
Surveyor-General:

SIR:—Inclosed please find report filled up, as per blank form sent for County Assessor to compile. I have made the same up from the ten different Assessors of our county, as they reported to me. Some of the items, in my opinion, are not as full as they should be; but on the whole, they are about correct. It is with considerable difficulty that I have been able to report as full as I have.

Yours respectfully, etc.,

W. H. PATTON, Recorder,
And ex officio Auditor and Clerk of Supervisors.

By R. R. PATTON, Deputy.

SAN DIEGO COUNTY.

A. E. MAXCY.....County Assessor.

ASSESSOR'S OFFICE,
San Diego, California. }

HON. J. F. HOUGHTON,
Surveyor-General:

SIR:—This county extends north and south from the southern lines of Los Angeles and San Bernardino Counties to the State line and Mexican boundary some ninety miles, east and west from the Colorado River to the Pacific Coast, some one hundred and fifty miles.

That portion lying between the Colorado River and Coast Range of mountains is a barren desert, comprising two thirds of the county. The remaining portion, lying between the dividing line of the Coast Range and Pacific Coast, though habitable and containing a few tolerably good ranches for grazing stock in good seasons, nine tenths is almost wholly unserviceable to man.

This county does not furnish its own few inhabitants with breadstuffs, fruit, or vegetables.

We have no internal improvements of any kind.

Some placeros have been worked the past year on the two peaks of mountains adjoining the River Colorado, called Pekatchy and Pilot Knob. Gold is obtained by dry washing, but not in large quantities.

We have a gold quartz mine some twenty miles from the Pacific Coast east, the quartz yielding thirty-five per cent of gold. It is not being worked at present.

A vein of copper ore and silver is now being opened five miles only from the Coast and twenty miles north from the town of San Diego.

The only other product of the county worthy of mention is the stock, for which I refer to the statistics.

The stock is dying in large numbers from starvation, and it is impossible to conjecture what portion will survive the coming winter.

Very respectfully,

A. E. MAXCY,
County Assessor, San Diego.

SAN JOAQUIN COUNTY.

J. M. LONG.....County Assessor.

OFFICE OF COUNTY ASSESSOR,
Stockton, Nov. 4th, 1863. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—I have the honor, in conformity with the law of the State, to submit to you the following as my annual report for the year eighteen hundred and sixty-three:

AGRICULTURE—WORKING THE SOIL.

The statement I made in a former report in regard to the great natural agricultural advantages of the county, it is unnecessary to repeat, as the remarks then made, particularly in regard to the character and quality of the soil, would now equally apply. The soil of this county is probably richer in all the essential elements necessary for the production of cereal crops than any other in the State. More attention is given to improved methods of cultivating the soil, and all the agricultural implements of modern invention and improvements are coming generally into use. Deep plowing is approved and generally practiced by the farmers, and husbandmen generally approve the practice of planting their crops on fallow land. This method of cultivating facilitates the early sowing of seed, extending to the crops all the benefits afforded by time before the dry weather of early summer sets in.

The agricultural productions of the county mainly consist in wheat, although a considerable amount of barley is raised. A greater number of acres have been devoted to the cultivation of barley this year than formerly, but the yield has been less per acre than that of last year. The whole amount of land in the county is one hundred and seventy-five thousand acres, and seventy thousand eight hundred acres of that

amount has been sowed in barley, which produced five hundred and sixty-six thousand four hundred bushels.

The amount of land in wheat was sixty thousand acres, and the quantity produced, six hundred thousand bushels. So it will be seen that although there has been ten thousand acres less land devoted to the raising of wheat than to barley, the amount produced of the former exceeds the latter by thirty-three thousand six hundred bushels.

The cultivation of oats, rye, corn, buckwheat, peas, and beans, have been circumscribed within narrow bounds; only twenty thousand bushels of oats, ten thousand bushels of rye, and six thousand bushels of buckwheat have been produced.

The cultivation of potatoes has been more extended. The amount raised on twelve hundred and fifty acres is one hundred and twenty-five thousand bushels. But the schedule of compiled statistics accompanying this paper will show you the various agricultural products, number of live stock, vines, and fruit trees; also improvements, value of real estate, personal property, etc.

TOBACCO.

But a limited attempt has been made to cultivate tobacco. Yet thus far the efforts of a few have been very successful in producing an article of good quality. It is believed the growth can be made very remunerative, and the only drawback to its extended production is the want of manufacturing facilities.

BROOMCORN AND SORGHUM.

Although the quantity is but light, a very superior article of broom-corn has been raised the past season; a quality—not long and slender, but short and brushy—such as manufacturers of brooms are anxious to obtain. Some fifty acres of land only have been planted in this article, and it yields so good a revenue for the labor used that there is but little doubt but its cultivation will be greatly increased the coming year.

Sorghum or Chinese sugar cane has been successfully raised in some places, and not so in others. On the rich lands bordering the Calaveras River the crop of sorghum has yielded as much as one hundred and seventy-five gallons of syrup to the acre. On deep alluvial soil, containing a good proportion of vegetable matter, the plant more easily obtains the requisite juices and therefore succeeds much better than on higher ground, where there is a comparative destitution of moisture, occasioned by the light and porous character of the soil.

FRUIT TREES AND VINES.

The superior attention given to the tillage of orchards and vineyards throughout the county is apparent from the quantity and excellent quality of the fruit produced. Peaches and apricots, which in former years were plentiful and luscious, have failed this year to come up to their former standard in many places. The cause of this is attributed to the damage done to the trees by the floods in the winter of eighteen hundred and sixty-one and eighteen hundred and sixty-two. Many trees died the following spring, and many more seem to have been irretrievably injured. The apple crop, however, has been good, as is shown by the adornment of the fruit gardens with heavy loads of well ripened

fruit. The grape producing and wine making interests of the county are rapidly growing into importance, and in a year or two will be paramount to the culture of all other kinds of fruits; the cultivation of the grape and the manufacture of wine are alike well understood, and the pursuit will soon lead to a large and constantly increasing revenue from that source.

BEES.

Bees have done very poorly this year, and instead of the nineteen hundred hives of last year doubling or trebling their number, there are only about one hundred more hives in the county, as shown by the figures of last year. The season has been peculiarly unpropitious for this indefatigably industrious insect, the more than ordinary length of the dry season militating greatly against them in procuring the desired nectar from the vegetable kingdom.

LIVE STOCK.

There has been a considerable falling off in the former amount of horned stock, which in a measure may be accounted for by the land throughout the county being nearly all fenced up; therefore, stock has to be driven to other and inappropriate localities for pasture. Sheep have greatly fallen off for like reason. It may also be proper to say, that an increased demand for sheep and cattle east of the Sierra Nevada Mountains has occasioned the removal of a large quantity of both to that market. The Washoe trade has occasioned the diminution of the number of mules, but first-class horses and the finer breeds of cattle and swine have slightly increased in number. By inviting your attention to the accompanying schedule of figures, particularly those relating to real estate, you will notice an increase of taxable property over last year of three hundred and twenty-two thousand two hundred and seventy-seven dollars.

Hoping the report will receive your approbation, I have the pleasure of subscribing myself

Your obedient servant,

J. M. LONG,
Assessor San Joaquin County.

SIERRA COUNTY.

ALFRED MARMON.....County Assessor.

OFFICE OF COUNTY ASSESSOR,
Downieville, Sierra County, Cal., September 23d, 1863. }

HON. J. F. HOUGHTON,
Surveyor-General:

SIR:—The statistics of this county are not so full and complete as I desired, but I find it a very difficult thing indeed to gather the various items required in the catalogue of statistics, especially where two thirds of the county is covered with snow, when the original assessment has to be made, (which in this county has to be done by the first Monday in June,)

and it naturally follows that many items of importance cannot be gathered, but upon the whole we feel satisfied that Sierra "lives," as the result of the second day of September testifies. Quite an acquisition also has been made in property by the settling up of Sierra Valley. Improvements are being made; stock raising is far superseding former years, both in cattle, horses, and mules. Hay in abundance is procured in this valley, and in fact the valley with its lands and property of all kinds is daily increasing in value, while many other portions of our county show strong symptoms of decay and depopulation. I assessed the people of the valley this year on their possessory rights to eighteen thousand one hundred and fifty-one acres of land, and one thousand two hundred and forty-seven head of stock cattle, one hundred and ninety-two yoke of oxen, three hundred and sixty-three horses, and forty-nine mules, besides five saw mills, of which Fletcher & Rowland have one from which they are cutting from seven to ten thousand feet per day, which they are hauling to Virginia City, Nevada Territory.

The assessed value of the property this year will not show quite as large as it did last, owing to about eight hundred thousand dollars of worthless mortgages that have been stricken from our county records by the persons applying to the Board of Supervisors this past summer, yet we hope to realize a larger sum, both for the county and State, than last year.

Howland Flat, in Northern Sierra, will probably yield more gold than any other mining camp in the county, with an increased population. And also at Fur Cap, Deadwood, etc., mines are being opened and developed of great richness, and which in all probability surpasses in richness anything yet discovered in this county, together with many new and valuable quartz ledges that have been discovered and tested in various portions of our county during the past summer, which places her on an equal footing with any in the State for mineral resources. Copper, also, has been found in some portions of the county in quantities sufficient to warrant good pay.

Many valuable homesteads have been assessed this year for the first time on the Truckee and Henness Pass Roads, east of Jackson's Ranch, which promises in future to increase the revenue of the county.

The fruit crop of apples, peaches, pears, grapes, etc., is abundant, especially peaches, which bend beneath their load of golden fruit, and the cheapness of such delicacies will testify to their superabundance.

I would mention that the line between Sierra and Plumas Counties has not been run, owing to the failure on the part of the Plumas County Surveyor to meet our County Surveyor at a stated time and place to run the line between the two counties. As it is necessary that such lines should be run and definitely settled, property holders near the lines, or contemplated lines, will then know to which of the two counties they are required to pay their taxes. As it now remains, disputes arise as to which of the counties they are entitled to pay to, and consequently some refuse to pay to either of the counties until the lines are defined.

We have twelve thousand acres of wild hay land, yielding a crop of four thousand tons of hay annually.

All of which is respectfully submitted,

ALFRED MARMON,
County Assessor of Sierra County.

SAN MATEO COUNTY.

S. H. SNYDER.....County Assessor.

OFFICE COUNTY ASSESSOR,
Redwood City, Nov. 4th, 1863. }Hon. J. F. HOUGHTON,
Surveyor-General :

SIR:—In conformity to the law and in compliance with your circular, I submit my annual report for the year eighteen hundred and sixty-three, which is as full and correct as I have been able to ascertain by diligent investigation. Although not as full as could be desired, still it approximates somewhat near the facts.

There has been an increase in the various productions of the county over last year; the principal productions being wheat, barley, oats, hay, and potatoes. In cattle there has been a decrease of nearly one third since last year. By the way of improvements, we have twenty-two miles of railroad now completed, and cars running their regular trips to and from San Francisco. You will observe by the report that there has been an increase in the assessed valuation of real estate. This fact is attributable to the sudden rise of real estate in the markets and the great demand for the same. To our improvement of railroad we owe this change. Our climate was good and our soil was prolific, and the railroad made it accessible and available. In regard to fruit, there is but very little grown in the county, the orchards being all young, and I did not make any returns of the quantity of fruit raised. Wheat, oats, and barley is a fair crop.

The number of acres of Marsh and Overflowed Lands is about ten thousand.

We have eight Public Schools, and well attended.

Yours, respectfully,

S. H. SNYDER,
Assessor of San Mateo County.

SAN LUIS OBISPO COUNTY.

VALENTIN GAJIOLA.....County Assessor.

SAN LUIS OBISPO,
September 26th, 1863. }Hon. J. F. HOUGHTON,
Surveyor-General :

SIR:—In conformity with law I herewith send the statistics of this county, hoping the report will meet with your approbation. San Luis Obispo County represents a variety of interests—agricultural, stock raising, and mineral. Live stock of this county has very much improved

within the last few years. Horses, cattle, and sheep have greatly improved by the importation of fine blooded American stallions, bulls, and rams.

FRUIT.

On the various farms of the county, the cultivators of orchards and vineyards have made considerable progress. The ranch of Mr. T. F. Branch, situated on the Arroya Granda, has yielded a very large lot of fruit, more so than that of any other farmer in the county.

MINES.

There has been discovered, on what they call the Santa Rosa Ranch, situated about forty miles from the county seat, a coal mine, which, from all accounts, is very rich. They have not commenced work on the mine as yet, but it is to be hoped the day is not far distant before they commence taking out that hidden treasure; also, there has been discovered a copper mine within twenty-five miles of the coal mine, which, from all accounts, is very rich. I think as soon as winter is over these mines will be worked with a will, and, in the meantime, the county is all alive about new discoveries of copper mines.

VALUATION OF PROPERTY.

Comparing the value of property of the year eighteen hundred and sixty two with eighteen hundred and sixty-three, you will perceive there has been an increase in the valuation of all kinds of property.

<i>Valuation of Property for Year 1862.</i>		
Real estate	\$234,721 50	
Personal property.....	274,021 06	
Total		\$512,742 56
<i>Valuation of Property for Year 1863.</i>		
Real estate.....	\$210,806 45	
Personal property.....	402,876 00	
Total.. ..		\$613,682 45

All of which is respectfully submitted.

VALENTIN GAJIOLA,
County Assessor of San Luis Obispo County.

By BENJAMIN F. HOOK, Deputy.

SANTA CRUZ COUNTY.

N. TAYLORCounty Assessor.

SANTA CRUZ,
October 6th, 1863. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR :—In compliance with law, I have the honor to submit to you the statistics of Santa Cruz County as collected while assessing the county. You will notice that there is an advance over the statement of eighteen hundred and sixty-two.

All the different interests in this county are being vigorously prosecuted, and new ones being opened.

A powder mill is being built on the San Lorenzo River a short distance above the paper mill, and other improvements are talked of.

The mining interests are being prosecuted quite thoroughly—several companies incorporated and vigorously at work.

The crops of all kinds are abundant this year in this county.

All of which is respectfully submitted.

Yours, etc.

N. TAYLOR,
Assessor of Santa Cruz County.

SUTTER COUNTY.

P. A. CLARKE.....County Assessor.

YUBA CITY,
November 6th, 1863. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR :—Inclosed you have my report, which I am sorry was not transmitted before this. I did not observe the erasure of the old date in your circular until a few days ago ; however, I hope it may reach you in time. The report is as correct as I could make it.

Many kinds of property in my county have greatly decreased, and also depreciated in value, whilst other kinds have increased—such as lands and improvements. Owing to the great emigration to newly discovered mineral regions, this county, I think, is decidedly retrograding ; much good land lying idle.

The culture of tobacco seems to have proven a failure, though the land is well adapted to its culture—that is, a great portion of it—but prices at the present are too low, and the expense of raising too great. Sugar-cane also, though growing well, for the same reason will occupy but little attention.

There is some improvement in horses and some in sheep, (I mean in stock,) but all other kinds seem to have very little attention paid to them.

You will see by my report no public improvements, such as railroads, turnpikes, or canals; no mills, either steam or water.

We scarcely raise any kind of hay but the natural grasses of the country, except the wild oats, which is also a native.

Our county is sparsely wooded, and that only fit for fuel.

I remain, very respectfully,

P. A. CLARKE,
Assessor of Sutter County.

TRINITY COUNTY.

GEORGE F. MIERS.....County Assessor.

WEAVERVILLE, Trinity County, }
October 2d, 1863. }

HON. J. F. HOUGHTON,
Surveyor-General:

SIR:—Please find accompanying this, statistics of this county.

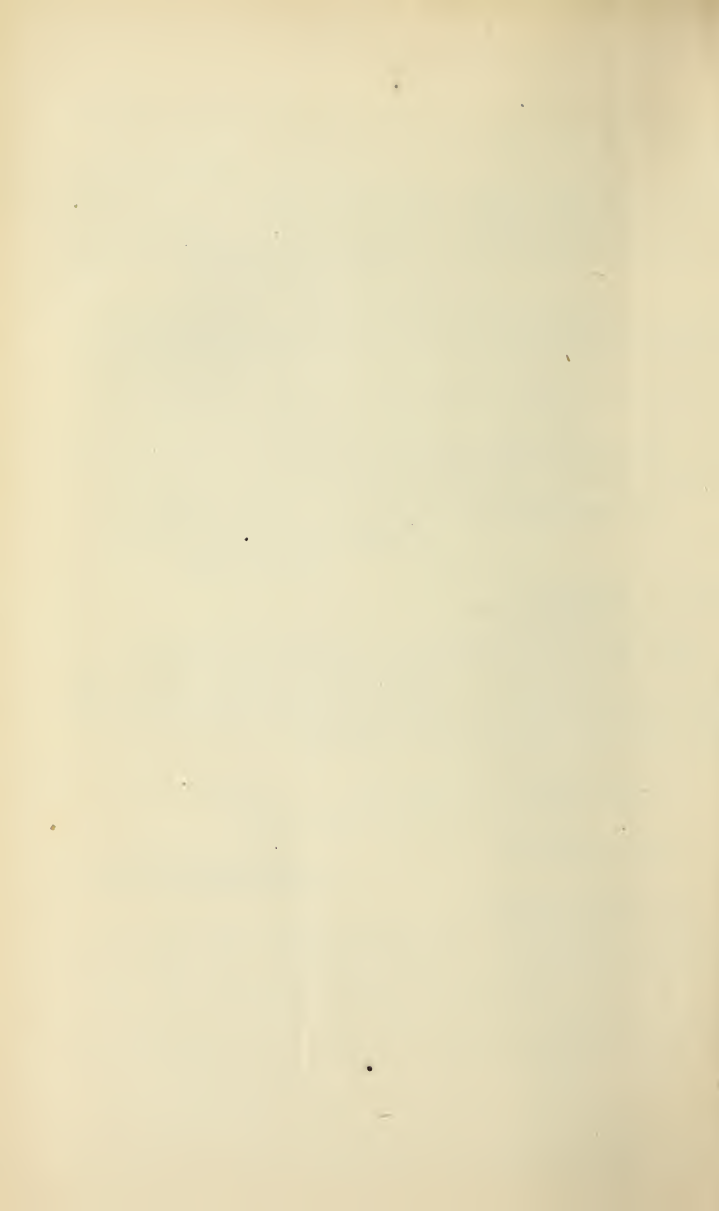
You will perceive that the taxable property of this county has fallen off, since last year about two hundred thousand dollars. So it is with the population; we have lost about five hundred voters since the election a year ago. As to the natural productions of this county, the report of last year will apply.

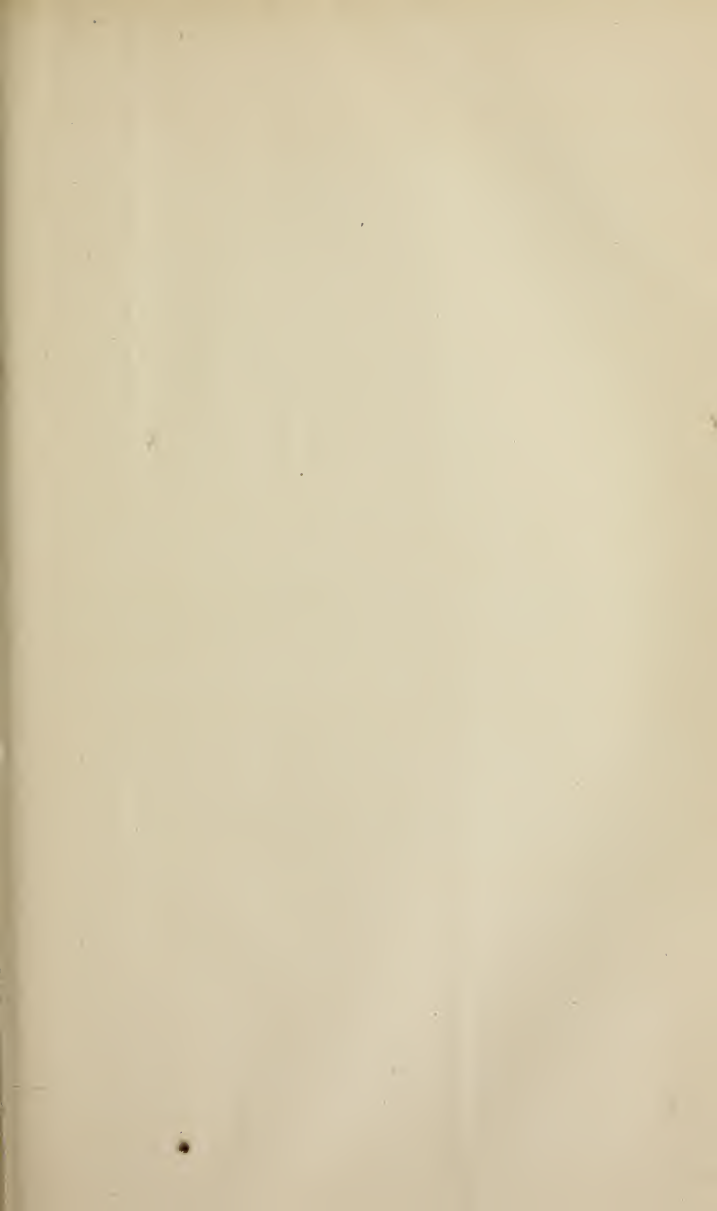
Very respectfully,

Your obedient servant,

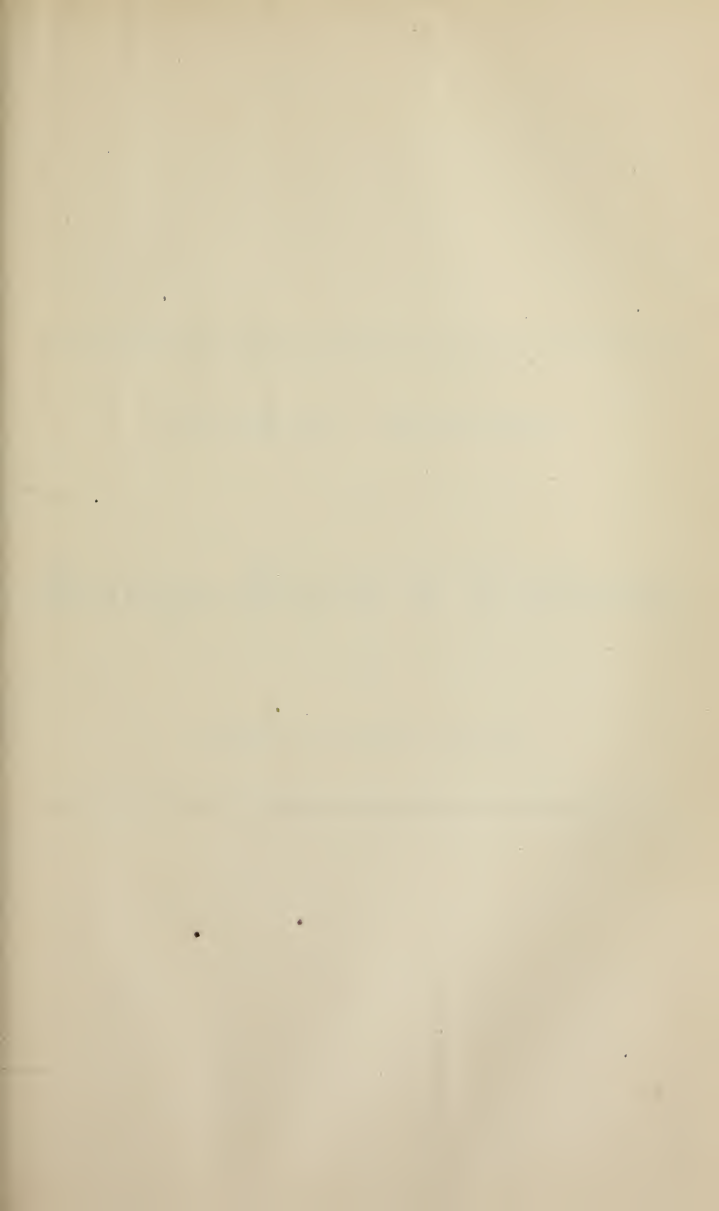
GEORGE F. MIERS,
Assessor of Trinity County.

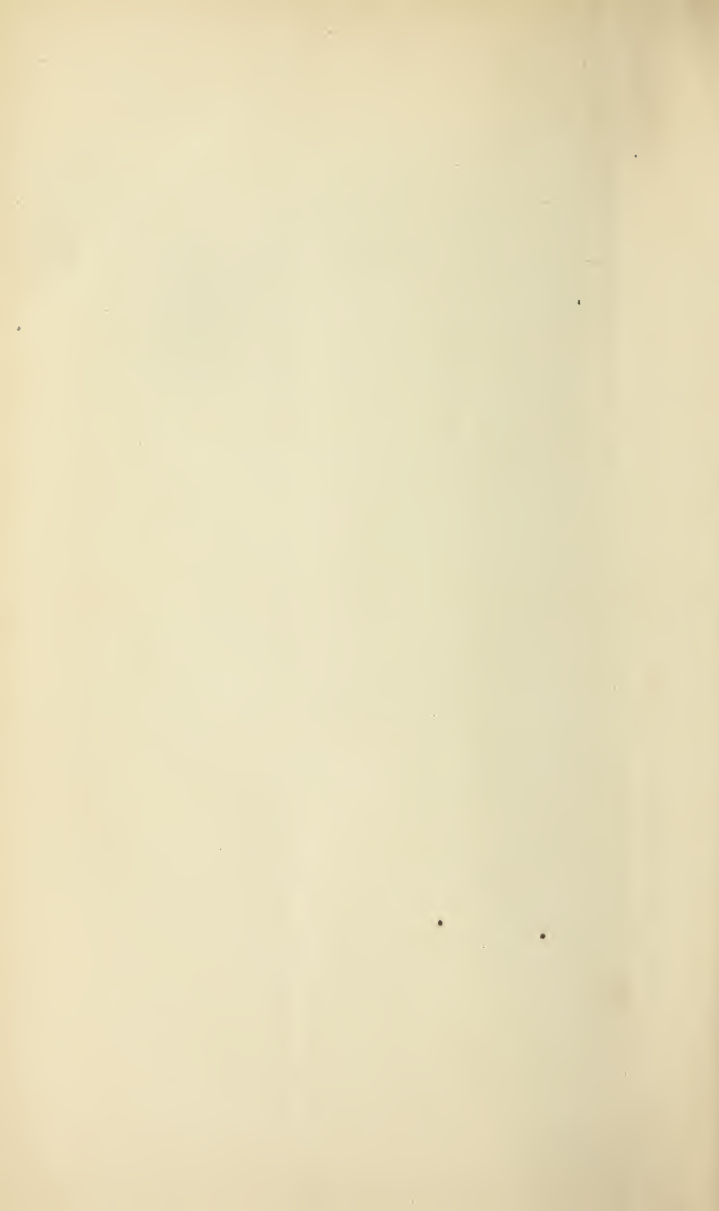
By H. NICHOLS, Deputy.











ANNUAL REPORT

OF THE

Surveyor-General of California,

FOR

THE YEAR 1864.

THE STATE OF MISSISSIPPI

AN ACT TO REPAIR THE BRIDGE OVER THE MISSISSIPPI RIVER AT THE CITY OF MEMPHIS.

ENACTED FEBRUARY 18, 1892.

O. M. CLAYES.....STATE PRINTER.

ANNUAL REPORT.

SURVEYOR-GENERAL'S OFFICE,
Sacramento, November 1, 1864. }

To His Excellency,
FRED'K F. LOW;
Governor of California:

SIR:—In compliance with the requirements of the law defining the duties of this office, I have the honor to submit for your consideration the following report, from November twentieth, eighteen hundred and sixty-three, to November first, eighteen hundred and sixty-four.

I am, very respectfully,

Your obedient servant,

J. F. HOUGHTON,
Surveyor-General, and Register of State Land Office.

STATEMENT OF ACCOUNTS

For the year ending 31st December 1904

By the Committee of the

British Association of Agricultural Chemists

For the year ending 31st December 1904

By the Committee of the

British Association of Agricultural Chemists

For the year ending 31st December 1904

By the Committee of the

British Association of Agricultural Chemists

For the year ending 31st December 1904

By the Committee of the

British Association of Agricultural Chemists

For the year ending 31st December 1904

By the Committee of the

British Association of Agricultural Chemists

For the year ending 31st December 1904

By the Committee of the

British Association of Agricultural Chemists

REPORT.

STATE LANDS.

The increasing importance of this subject will continue to claim for it the front rank in the annual reports of this office, until such time as the State secures from the General Government and gives to every purchaser under the laws of our State the title which has been promised, and yet so long delayed.

In the case of school lands, the proper course to obtain such titles from the General Government is, for the State authorities, immediately upon the selection of any portion of the public domain, to notify the local United States Register of the district in which the land is located that such selection has been made by the State in part satisfaction of the sixteenth and thirty-sixth section grant, the five hundred thousand acre grant, or the seventy-two section grant for the use of a seminary of learning, as the case may be, and here the duty of the State should end.

The United States local Register is required by instructions from the Commissioner of the General Land Office at Washington to note all such selections upon his maps, and report them to that office for examination and approval or rejection, and, in case of approval, to be certified over to the State.

The duties of the officers of the State in this matter have, for nearly thirteen years, since first any of these lands were offered for sale by the State, been faithfully and promptly performed, and the United States Registers have been duly notified of every selection made.

I have reason to believe that as a general thing the Registers have performed their duties so far as instructed by the General Land Office, yet not a single acre of land of any description has been listed or patented to the State. The first systematic attempt to perfect the title to the swamp and overflowed lands granted to the State by Act of Congress of September twenty-eighth, eighteen hundred and fifty, was by an Act of the Legislature, approved May thirteenth, eighteen hundred and sixty-one, creating a Board of Swamp Land Commissioners, to take charge of the segregation and reclamation of all the swamp and overflowed land within the State which was conveyed by the grant. It was made the duty of the Board to forward to the County Surveyors blank affidavits of the form required by the General Land Office, which affidavits, after a survey of the land, the County Surveyors were to have

sworn to and subscribed by respectable witnesses who lived in the vicinity of and* were well acquainted with the land, thus proving the swampy character of all the land claimed by the State under the grant. Segregation surveys were made in nearly all those counties in which any considerable quantities of swamp land occur, and the affidavits procured. Duplicate maps were made, and one copy, with the required proof, forwarded by the Governor to the Department at Washington.

If any reply came to the request to have the lands so claimed certified to the State, I have not been made acquainted with it. During the session of the Legislature of eighteen hundred and sixty-two, after consultation with the United States Surveyor-General Beale, in regard to the best method of presenting the claim of the State to these lands before the General Land Office, I recommended the passage of an Act requiring the Register of the State Land Office to prepare lists of all lands claimed by the State under the several Acts of donation; also, certified copies of all affidavits, or other evidence that the lands so claimed are the property of the State, within the meaning of the several Acts making the donations, and to file such lists and affidavits with the Surveyor-General, or Register, as may be required by the rules of the United States Land Department.

Under this Act, in addition to other duties required by the Act, I prepared full copies of all the segregation affidavits, and all other evidence on file in this office proving the character of the land, together with full lists of the land, and took them in person to the United States Surveyor-General at San Francisco, who forwarded them to the department. After a long delay he reported to me that the department were not satisfied with certified copies, but must have the original papers. I immediately took him the originals, returning to the files of this office the certified copies, which originals he forwarded, and again he reported that the Commissioner objected to the form of the affidavits procured, inasmuch as the State Agent in his affidavit did not state the reason why the affidavit of the swampy character of the land was not made by the United States Deputy Surveyor and his assistants who made the survey of the adjoining high land in the township.

It is hard to see the force of this objection when we consider the fact, that of the townships in which the State claimed swamp and overflowed land, not one in ten had ever been surveyed by authority of the United States, of which fact the Commissioner could easily have informed himself by a glance at the map accompanying the United States Surveyor-General's report.

In all those townships in which no United States survey had been made, the instructions of the Commissioner of the General Land Office to the United States Surveyor-General for California, dated December thirteenth, eighteen hundred and fifty-nine, had been fully complied with, yet, for the reason that in the few townships which had been so surveyed, the State Agent did not procure the affidavits of the United States Deputy and his assistants to the character of the land so claimed, nor state any reason why he did not so procure them, the whole proof, which has cost the State so much time and money to procure, is rejected.

These affidavits were procured at the time of making the segregations, before my advent into the office, but as soon as this objection, which was pertinent only so far as related to those townships which had been surveyed by the United States was raised, I notified the Swamp Land Commissioners, requesting them to procure new proofs not subject to

this objection, and notified County Surveyors of the new form of affidavit required.

In Townships five, six and seven north, Range four east, of Mount Diablo meridian, embracing those narrow strips of land, a few rods in width, on the banks of the Sacramento River, which had been settled upon and reclaimed by enterprising settlers, by constructing levees and drains, stopping the mouths of the smaller sloughs, and by other methods, rendering them susceptible of cultivation, although it was no part of my duty, as an initiative step I prepared affidavits of a form to answer the last objection, and had them duly sworn to and filed with the United States Surveyor-General.

Ten months have elapsed since these affidavits were filed, and I believe they were at once forwarded to the department; yet I have heard of no reply having been received.

The difference between the Commissioner of the General Land Office and the State authorities in construction of the sixteenth and thirty-sixth section grant, in regard to the right of the State under the law to select unsurveyed lands in lieu of such sections where they are covered by grants, or have been taken for public uses, and also the instructions of the Commissioner to the local Registers, that where a township falls wholly within a private claim, the State is not entitled to lands in lieu of the sixteenth and thirty-sixth sections, has been fully discussed in the reports of this office for the years eighteen hundred and sixty-two and eighteen hundred and sixty-three, and will not be repeated here.

During the session of eighteen hundred and sixty-two, the Legislature, by concurrent resolution, selected the Honorable William H. Parks as a Commissioner to proceed to Washington, for the purpose of adjusting all questions relating to the title of the State to the lands claimed under the several grants. The Commissioner thus selected was furnished by this office with ample proofs of the claims of the State to all lands claimed by her, involving much labor in their preparation, and with them he proceeded to Washington and laid the case before the Commissioner, but failed to obtain any definite result to his mission, with the exception that the Commissioner at his request forwarded instructions to the United States Surveyor-General to give the State the same privileges as settlers under the Act of Congress of May thirteenth, eighteen hundred and sixty-two, which provided that the settlers upon any township could have a survey of said township made by the United States Surveyor-General at their own expense.

The State Commissioner at the close of his report to the Governor says: The State of California "has a right to complain that owing to the peculiar views of the Commissioner she has not been able to obtain that to which she is justly entitled."

Soon after the report of the Honorable W. H. Parks, Commissioner above referred to, taking into consideration the many and total failures of the State to obtain a recognition of its titles in the usual way, notwithstanding it would seem that every duty of its officers had been faithfully and fully performed, I drew up and presented to the Legislature at its session in eighteen hundred and sixty-three, the concurrent resolutions adopted April twenty-fourth, eighteen hundred and sixty-three, requesting our Senators and Representatives in Congress to procure the passage of an Act which should provide that wherever the proper authorities of the State had in good faith selected any portion of the public domain in part satisfaction of any grant made to the State by Act of Congress, and had in the same good faith sold the same to

purchasers under her laws, the same should be confirmed; also pledging the State, that if upon final investigation and decision it should appear that the State had selected any land to which she was not entitled, she should pay into the Sub-Treasury of the United States the sum of one dollar and twenty-five cents per acre for each and every acre so determined to have been improperly selected.

Agreeably to the instructions contained in the last of the resolutions, I prepared certified copies of them, and forwarded one, each, to the Honorable Secretary of the Interior, and the Honorable Commissioner of the General Land Office, accompanied by a long communication proposing to make the resolutions a basis of settlement of all questions of difference between the United States and the State, in regard to the several donations of land to the State.

In that communication I presented all questions of difference, as understood by the State authorities, briefly setting forth the effects of those differences upon the State, and the grounds upon which the State relied, the form of affidavit required of State purchasers, and other witnesses, that the lands claimed were unoccupied and unimproved, except by the applicant to purchase of the State, and that no valid claim existed upon said land adverse to the claim of the said applicant, requesting them to answer if the plan suggested by the resolutions met their approval, and respectfully solicited their co-operation with our congressional delegation for the purposes therein indicated; which resolutions and communication will be found in the report of this office for the year eighteen hundred and sixty-three.

To this communication I had hoped to receive a reply before the departure for Washington of our congressional delegation in the fall of eighteen hundred and sixty-three, but neither before nor since that time has any reply been received.

Previous to the departure of the delegation at that time, I conferred with most of them on the subject, and promised to draw up a bill embodying the essential points of the resolutions, and forward it to them for presentation to Congress. Agreeably to such promises, and actuated by no other motive than to do equal and exact justice to all, as nearly as at this late day it could be done, I drew up, and forwarded to the delegation, the following bill:

“AN ACT to confirm to the State of California, and purchasers under her laws, selections of land made in part satisfaction of various Acts of donation by Congress.

“SECTION 1. Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That it shall be the duty of the Secretary of the Interior to certify over to the State of California all lands, whether surveyed or unsurveyed—which have been sold by the State to purchasers in good faith—which have been selected by the authorized agents of said State in part satisfaction of the grant of five hundred thousand acres made by Act of Congress, approved September fourth, eighteen hundred and forty-one, for purposes of internal improvement; all lands, so located, as part of the grant of seventy-two sections, for the use of a seminary of learning, made by Act of Congress of March third, eighteen hundred and fifty-three; all lands so selected, as part of the ten sections granted by the last named Act, for the purpose of erecting the public buildings of the State of California; provided, the amount so certified to said State shall in no case

exceed the amount embraced in said grant; also, all lands selected in lieu of the sixteenth and thirty-sixth sections of any township in the State, where such sections were covered by private grants, reserved for public uses, or settled upon previous to such selections; *provided*, that at the time of such selection, the lands so selected by the State were unsold, unoccupied, and unimproved, except by the parties seeking to purchase of the State; and, *provided*, further, that no selection of land by the State Agents shall be confirmed upon which any valid pre-emption or homestead right existed at the date of such selection.

“SEC. 2. *And be it further enacted*, That immediately upon presentation, by the authorities of said State to the Register of the United States Land Office, of any list of lands within his district, selected as provided in section one of this Act, with the dates of selection, it shall be the duty of such Register to add his certificate, whether there is in his office any evidence of occupation, pre-emption, homestead, or other right acquired to such land, at the date of such selection; which certificate shall be deemed sufficient evidence upon which to certify over to the State all lands embraced in such lists upon which no such rights existed as aforesaid; and the Register shall be authorized to charge and collect of said State a fee of one dollar for examination of each location and certificate.

“SEC. 3. *And be it further enacted*, That whenever the proper authorities of the State of California shall furnish the Secretary of the Interior with lists of swamp and overflowed lands surveyed by authority of said State, with affidavits, taken before an officer qualified to administer oaths, of not less than two respectable witnesses, in the following form, or to the following effect, to wit:

“We, ———, residents of ———, in the vicinity of the lands hereinafter described, lying in the County of ———, State of California, being duly sworn, depose and say, that we are well acquainted with the mode and manner of surveying and marking the public lands; that we have made a personal examination, on the ground, of each of the several tracts hereinafter described, to wit: ——— and from such personal examination on the ground, have ascertained and know, and hereby make oath that the greater part of each one of the quarter-quarter sections of the foregoing tracts is swamp and overflowed land, made unfit thereby for cultivation, and is in fact unfit for cultivation without necessary drains and levees to reclaim the same; that they are made so by reason of the overflow of ———, in such manner that no crops could be raised thereon by reason of its overflowed and swampy condition; that they are not shallow lakes or ponds, which by natural causes may become dry, and that, to the best of our knowledge and belief, such was the character thereof on the twenty-eighth day of September, eighteen hundred and fifty, the day of the passage of the Act. And further, that we have no interest, direct or indirect, present or prospective, in the issue, or in any parcel of the land herein described, save and except ———.

“It shall be the duty of the Secretary of the Interior to certify over to the State all lands embraced in said lists, as part of the swamp and overflowed lands donated to said State by Act of Congress, approved September twenty-eighth, eighteen hundred and fifty; *provided*, that no lands shall be so certified to which any patent of the United States may have been issued at the date of the passage of this Act.”

This draft of a bill was accompanied by the following letter, and subsequently the next letter upon the same subject was forwarded :

STATE OF CALIFORNIA, OFFICE OF THE SURVEYOR-GENERAL, }
Sacramento, January 5th, 1864.

HON. JOHN CONNESS,

U. S. Senate, Washington, D. C. :

DEAR SIR :—In compliance with my promise made before your departure for Washington, I send you herewith inclosed a draft of a bill, which, if it can be passed in its present form, will protect all purchasers under the laws of our State, and at the same time will protect all homestead, pre-emption, or other rights which may have been acquired upon any of the public domain by actual settlers.

It will be very necessary to the success of any bill disposing of public lands, in my opinion, to first obtain the approval of the Land Office at Washington, and this, since it is careful to select only such lands as were unoccupied and unimproved at the time of selection, I have no doubt would meet their approval. The form of affidavit required by the bill to prove the character of the swamp lands, is the form which we have obtained in all the segregations now made, and can be furnished at a very short notice; in fact, I think Surveyor-General Beale has already forwarded them to the department.

If it is deemed necessary to add a section authorizing the Secretary of the Interior to appoint a Commissioner, to act in conjunction with one from the State, to determine if any selections have been improperly made, and in case of such improper selections, for the State to pay one dollar and twenty-five cents per acre for the land so improperly selected, you may add it.

The concurrent resolutions passed by the last Legislature seem to require such a clause, but, if not essential to the passage of the Act, it had better be omitted.

I will in a few days find leisure to explain more fully the bill.

With my best wishes for the success of the delegation in securing the passage of this bill,

I am, very truly, your obedient servant,

J. F. HOUGHTON,
Surveyor-General.

STATE OF CALIFORNIA, OFFICE OF SURVEYOR-GENERAL, }
Sacramento, March 28th, 1864.

HON. JOHN CONNESS,

U. S. Senate, Washington, D. C. :

DEAR SIR :—I send you herewith inclosed, certified copy of Senate Concurrent Resolution Number Twenty-Three (23) on the subject of swamp lands which are claimed by State and United States.

I also send a copy of a letter of Commissioner Edmunds of the Land Office at Washington to the Register and Receiver of the United States Land Office at Stockton, dated January fourth, eighteen hundred and sixty-four, in which he asserts that the State has no rights in any swamp land until the same are reported as such by the United States Surveyor-General, and virtually instructs him to disregard a State patent for

swamp and overflowed lands, and to permit homestead filings upon such lands.

The constant stream of letters received at my office upon this subject from the persons interested in this class of lands is an index to the great interest which they feel in securing good and unimpeachable titles to their lands, and I am satisfied that no Act which can pass Congress affecting the interests of the citizens of this State would meet with more universal approbation than one which would give such titles to purchasers under the State laws. On the fifth day of January last, agreeably to my promise to the delegation, I framed and forwarded to your address such a bill as, in my judgment, would best tend to bring about such a result, and which at the same time I thought would meet with least objection at the General Land Office.

I have not heard of its receipt. If that bill can become a law, all disputed questions between the State and the United States in regard to lands already sold by the State are forever set at rest.

I desire in this connection that the attention of the Honorable Commissioner may be called to the decisions of our Supreme Court upon the question of the State title to the swamp and overflowed land, in order that he may see that we are honest in our opinions, even if, as he declares, we are wrong.

Our Court decides as follows, in the case of *Owens v. Jackson*, (9 Cal., page 322): "This State has the right to dispose of the swamp and overflowed lands granted to her by Act of Congress prior to the issuing of a patent by the United States so as to convey to the patentee a present right as against a trespasser." And in *Summers v. Dickinson*, (9 Cal., page 554,) that: "Immediately upon the passage of the Act of Congress of September twenty-eighth, eighteen hundred and fifty, this State became the owner, with absolute power of disposition, of all the swamp lands within her limits which had not been disposed of. The title of the State in no way depends upon a patent. The Act itself operates as a conveyance."

Under these decisions, which have been universally respected, you can readily see that persons who have purchased of the State will resist to the last extremity of the law any other title which may be obtained, and I ask in candor if the decision of the Honorable Commissioner will not tend to lead into trouble, strife, and litigation, any person who may endeavor to obtain title from the United States to lands which, nearly fourteen years since, were donated to the State?

I think it would be well in this connection to call the attention of the Honorable Secretary of the Interior to provisions of section two of the Act of donation, which makes it the duty of the Secretary of the Interior, *as soon as may be practicable after the passage of the Act*, to make out an accurate list and plats of said lands, and transmit the same to the Governors of the several States, and, at the request of the Governor, shall cause a patent to issue to the State for said lands. I presume the decisions of our Courts are based upon the well settled principle of common law, that the neglect or refusal of the Secretary would not deprive the State of the grant. Nearly fourteen years have elapsed since the passage of the Act of donation. Large quantities of these lands have been returned by the United States Deputy Surveyors as swamp and overflowed lands, and many years have elapsed since many of such returns were made, and yet not a single acre has been listed to the Governor of this State, as the Act requires.

Our Court holds that the words of the Act "shall be and the same

heroby are granted," made it an immediate present grant on the passage of the Act, and so decided in *Summers v. Dickinson*, before quoted.

In the year eighteen hundred and fifty-nine, H. A. Higley, as agent of the State, went to Washington to agree with the Commissioner of the General Land Office upon the testimony which the State would be required to furnish of the character of the land claimed by the State as swamp and overflowed, under the Act. After much correspondence on the subject, forms of affidavits were given by the Commissioner, requiring the affidavits of two respectable witnesses, the State Agent, and also the United States Deputy and his assistants who made the survey of the township in which the lands claimed were situated, and in case the affidavits of the United States Deputy or his assistants could not be procured, from any cause, the affidavit of the State Agent was to state the fact.

The State Agents went to work with the segregation surveys, carefully taking testimony of the character of the land at the date of the grant, but as there were but few townships containing swamp and overflowed lands which had been surveyed by the United States, the affidavits of the United States Deputy and his assistants could not of course be obtained, and the State Agents did not give any reason why, thinking that the United States Surveyor-General would know the fact that no United States survey had been made. These affidavits were properly forwarded to the General Land Office, and were all rejected, because the State Agent did not in his affidavit state why the United States Deputy did not make the affidavit, when no survey had ever been made by the United States.

Now, the State must be put to the expense of obtaining all these affidavits over again, unless the Commissioner will modify his decision in such a manner as to accept the affidavits as they are, in such townships as, at the time of obtaining them, no United States survey had been made.

The State, in asserting her rights to these lands under an absolute and present grant of Congress, must not be regarded as placing herself in an attitude hostile to the General Government, but simply as resisting and protesting against the decisions of a subordinate officer, whose decisions, without judicial force, are, as our own Supreme Court has shown, contrary to law, depriving us of our rights by placing himself in hostility to positive congressional enactments. The trouble is that our communications on this subject seldom or never reach headquarters. I doubt very much if the Secretary of the Interior is aware that a duty so plainly defined as his, under section two of the Act, has been so long neglected, and think if he could understand the difficulties which are daily arising from such neglect he would order the lists of all lands which have been returned to be made out and certified to the State.

The State waited five years after the donation for the lists before any law was passed providing for the sale of these lands.

The bill which I drafted and forwarded to you January fifth would, if it could become a law, obviate all difficulties, not only in this class of lands, but in all others; or any bill drawn in conformity with the resolutions passed by our Legislature April twenty-fourth, eighteen hundred and sixty-three, will cover all cases. In conclusion, allow me again to call the attention of yourself, and through you that of all our delegation in Congress, to the inclosed copy of the letter first referred to, and all other matters herein contained, and to say that I know of no measure particularly affecting the interests of our State which would merit and

receive more universal approbation than this which I have herein advocated for the settlement of land titles in this State.

I have the honor to be, sir, very respectfully,

Your obedient servant,

J. F. HOUGHTON,
Surveyor-General.

Upon the return of the delegation, I learned that owing to a press of other business, considered by them (erroneously, I think) of more importance, nothing had been done with the bill.

Renewed exertions will be made during the next session to secure the passage of this or some other bill, which, if successful, will bring joy to the homes of the nine thousand purchasers of lands under the State laws, who have paid their money, improved their lands, and anxiously and patiently awaited the full and perfect title which the State for the past twelve years has promised them. At this late day it would be a miracle if any bill could be framed which should do equal and exact justice to all; but I respectfully submit that there is greater injustice in permitting the titles of nine thousand pioneer purchasers, loyal American citizens, to remain in an imperfect and inchoate state, subject to attack, a fruitful source of litigation and consequent distress and poverty, for the convenience of a hundred or so contestants, coming subsequently, than there is in any Act which, with an apparent attempt at justice, settles forever the title to such lands.

It has been suggested by leading journalists that the greatest drawback to an increase of population, and consequent material prosperity, of all the interior portion of our State, is the uncertainty and insecurity of land titles; if, indeed, a positive falling off has not been the result.

To a great extent this is true. There is nothing which tends in an equal degree to attach a man to the place in which he lives as a proprietary interest in the soil on which he treads; something immovable and fixed, which he owns, and where he is at home; and I know of no service which our congressional delegation can render the people of this State which would be more fully and universally appreciated than that which would settle the land titles of the State in the manner suggested.

STATE LAND LAWS.

In view of the fact that the Commissioner of the General Land Office did not recognize the right of the State to select unsurveyed school lands, and with a desire that the difficulty might not be further increased until some method of adjustment had been arrived at, I drew up, and caused to be presented to the Legislature at its last session, a bill, which became a law, suspending the sale of unsurveyed lands in lieu of sixteenth and thirty-sixth sections, and immediately upon its passage issued instructions as required by the Act, to the State agents to receive no new applications for such lands, but permitting such applications as had been formally accepted by them to be perfected. The effect of this law will be very

beneficial. The only class of unsurveyed upland which can now be purchased of the State under any of its laws, is a portion of the five hundred thousand acre grant by location of school land warrants.

At the time of the sale of these warrants by the State, they were permitted to be located by the owners upon any public land, whether surveyed or unsurveyed, and it was argued that it would be an act of injustice for the State to dispose of these warrants, saying to the purchaser, "you may locate them either upon surveyed or unsurveyed public land," and afterward to take away or impair that privilege.

Not wishing to jeopardize the passage of the bill in relation to lieu lands, in which the greater part of the difficulty arose, the location of school land warrants upon unsurveyed lands was not suspended.

I desire again to call your attention to the subject of the State laws in regard to the sale of salt marsh and tide lands within five miles of the Cities of San Francisco and Oakland, and within one mile and a half of the State Prison, which was referred to in my letter of June second, accompanying the certificate of the State Register for a patent to be issued to Albert Lusk for a tract of such land within the five mile limit of the City of Oakland.

By a casual or a careless reading of the statutes upon this subject, it would appear that all such lands were exempted from sale: but by a careful reading it appears that such is not the case, and that the laws providing for their sale stand upon the statute book unrepealed.

If the State desires to reserve from sale what there may be remaining of these lands, an immediate repeal of the statutes referred to is necessary. My attention was first called to this matter by receiving from the County Surveyors of Alameda and San Francisco surveys of such lands for applicants to purchase them, and by demand of the attorney of Mr. A. Lusk, one of the applicants, for a certificate of purchase.

This certificate of purchase I refused to issue except upon the opinion of the Attorney-General, which opinion the attorney for Mr. Lusk obtained, and the certificate issued; and upon full payment the certificate for a patent, before referred to, was also issued.

The views contained in this opinion of the Attorney-General were sustained by the Honorable Judge Southard, of the District Court for the Seventh Judicial District, in the case of *The State v. Simms*, a suit brought by the State to set aside a patent issued under the same statutes for tide lands within one mile and a half of the State Prison, which suit was decided against the State.

Regarding these cases as sufficiently indicative of my duties, all similar cases have been treated in a similar manner to that of Mr. Lusk.

COUNTY BOUNDARIES.

For many years past a controversy has been going on between the Counties of Sacramento and El Dorado—sometimes appearing in the Courts—in regard to the starting point upon the South Fork of the American River of the boundary between the two counties.

Upon application of the Board of Supervisors of El Dorado, and with notice to the Board of Sacramento County, this point has during the past summer been definitely established.

In order that the opinion of the Surveyor-General in this case may be used as a precedent by County Surveyors, when called upon to run county boundaries in cases where a similar wording of the statute occurs, it is herewith submitted :

STATE OF CALIFORNIA, SURVEYOR-GENERAL'S OFFICE, }
Sacramento, March 14th, 1864. }

In the matter of the application of the honorable Board of Supervisors of El Dorado County for a survey of that portion of the boundary line between said county and the County of Sacramento, so as to define and mark the point, on the South Fork of the American River, in dispute between said counties, and described in the Act of March thirtieth, eighteen hundred and fifty-seven, as follows:

"Thence up the middle of the principal channel of the South Fork to a point one mile above the head of Mormon Island, so as to include Mormon Island in Sacramento County."

The Supervisors of the County of El Dorado, by their attorney, J. J. Williams, contending that the point one mile above the head of Mormon Island should be determined by measurement of the *meanders of the river* a distance of one mile; and the Supervisors of the County of Sacramento, by their attorney, H. H. Hartley, contending that the point should be established by running *a direct line* in such a manner as to strike the river one mile distant.

The fourteenth day of March, instant, was set for a decision upon briefs to be filed by both parties with the Surveyor-General. Briefs were filed by both parties, and, after careful examination and consideration of all the authorities therein referred to, the Surveyor-General is of opinion that the principles and rules laid down in the case of Banta's Heirs vs. Calhoon, in the Kentucky Court of Appeals, (2 A. K. Marshall, p. 291,) have a more direct bearing upon the points in controversy in this case than any other authority cited.

In that case the question occurs on the validity of an entry of land, which reads as follows :

"Sixteenth December, seventeen hundred and eighty-two, Josiah Watson enters one thousand two hundred acres of land, on a branch of Brashears's Creek, beginning half a mile below a *lick* known by the name of *Cany Lick*, and running up the west side of the creek about half a mile above the lick, then turning an east course across the creek for quantity.

"Also, one thousand two hundred acres, beginning at the north corner of the west line of his last entry, and running up the west side of the creek about one and a half miles, then turning an east course across the creek for quantity."

Also, another entry bounding upon and referring to the last entry.

In this case, the Honorable Judge Owsley, delivering the opinion of the Court, says :

"The first entry in the chain of entries should begin on the west bank of the creek, one half mile below the lick, and from thence extended up the west side of the creek, with its meanders, to a point one half mile above the lick, on a direct line, and from thence an east course for quantity. The second entry should begin at the half mile point on the

creek above the lick, and extend up the creek, with the meanders, on the west side *one mile and a half when reduced to a straight line*, and thence east for quantity."

The Surveyor-General therefore decides that the principles enunciated by the Honorable Court in deciding the above case, should govern in the case in controversy, and that the point in dispute should be located in the middle of the principal channel of the South Fork of the American River, distant one mile in a direct line from the head of Mormon Island, the middle of said principal channel being the boundary line of the counties between the points referred to.

By an Act of the Legislature, approved April first, eighteen hundred and sixty-four, the boundaries of Sutter County were defined, and upon application of the Board of Supervisors, that part of the new line dividing Sutter from the Counties of Sacramento and Placer has been run and marked with enduring monuments. The rules laid down in the above decision were also applied to this survey.

Maps and field notes of the above named surveys are on file in this office.

Information has reached the office of a survey by the County Surveyor of Stanislaus of the line between that and Tuolumne County, and of one or two other surveys in different parts of the State, but no plats or field notes relative to them have been received.

In the various reports of this office, complaints made by the Assessors of several counties in regard to indefinite boundary lines, by reason of which many persons contrive to escape taxation, have been noticed; the suggestions contained in such reports are here renewed.

After the adjournment of the Legislature at its last session, my attention was called to the fact that in the creation of the Counties of Alpine and Mono a considerable tract of land had been separated from the principal portion of Amador County, and had not been attached to either of the above named counties.

The following letter explains the whole matter :

STATE OF CALIFORNIA, OFFICE OF SURVEYOR-GENERAL, }
Sacramento, August 2d, 1864. }

To the Honorable BOARD OF SUPERVISORS,
Amador county :

GENTLEMEN :—By a careful reading of the original Act defining the boundaries of your county, and of the Acts creating the Counties of Mono and Alpine, you will see that all that portion of your county as originally defined lying east of the Sierra Nevadas and east of the ridge dividing the waters of the East Carson and West Walker Rivers is still in your county.

In this district is embraced Antelope Valley, part of Hundred Spring Valley near an alkali lake, and many ranches on the West Walker.

The property holders in these localities very properly claim to be neither in Alpine or Mono, and will escape taxation unless taxed in your county.

Will you please attend to it and notify your Assessor ?

I am, gentlemen, very truly,

Your obedient servant,

J. F. HOUGHTON,
Surveyor-General.

This territory should be joined either to Mono or Alpine at the next session of the Legislature. I desire to call your attention to the report of the Assessor of Tehama County, recommending that a small fraction of Plumas County, which he says escapes taxation for want of knowledge of lines, should be joined to Lassen or Tehama. If the Assessor of Plumas attends to his duties, I cannot see the force of the suggestion.

SWAMP AND OVERFLOWED LANDS.

By reference to the table showing the amount of this class of lands applied for during the past year, it will be seen that in seasons of extreme drought, like the past, it is in high favor. The opinion which has been previously expressed in the reports of this office of the value of this land for the production of the cereals, has been more than sustained in every instance where trials have been made. During the past season, crops of wheat and barley have been raised upon the swamp lands near the mouths of the Sacramento and San Joaquin Rivers, by persons with whom I am personally acquainted, and whose statements are entitled to full credit, and they report to me that they have raised crops of seventy, eighty, and in one case, one hundred, bushels to the acre, and this in some cases with much less labor than is required upon upland; the process of cultivation after reclamation being, first, to burn the sod to a depth of four, six, or eight inches, during the dry season, then sowing the seed and brushing it in with a brush drag, no plowing being required, after which it requires nothing more until harvest.

They report to me that barley does much better than wheat, the latter being liable to rust. Upon these lands there have been cut large amounts of hay, which, although not equal in quality to the wild oat hay of the upland, furnishes a very good substitute in years like this of extreme scarcity, and in many counties, total failure of the oat hay crop, and without it this product would have been entirely inadequate in quantity to the wants of the State.

When we add to this the fact that a larger portion of the horned stock of the central portion of the State, and many of the largest and best flocks of sheep, have been driven to it for subsistence, its value will be appreciated.

That it is practicable to raise upon it tobacco, rice, and many other crops which have not yet been tried, I have but little doubt, and the State will hail with pleasure the accounts of the first successful experiments in these or other untried products.

STATE LAND FUNDS.

The condition, in the State Treasury, of the several funds arising from the sale of State lands, and the causes from which this condition arose, has been fully treated in the reports of this office for the past two years.

Since the Act of April twenty-seventh, eighteen hundred and sixty-three, commonly known as the General Land Act, went into effect, no County Treasurer can pay one dollar into the State Treasury from the sale of any State lands, except upon the certificate of the Register of the State Land Office that such payment is properly reported; and the consequence is, that since that time no errors can have occurred. As is shown by the report of this office for eighteen hundred and sixty-two, the several funds up to that time were in a confused condition, which can only be remedied by the suggestions contained in the reports of eighteen hundred and sixty-two and eighteen hundred and sixty-three, which suggestions are here renewed.

EASTERN BOUNDARY SURVEY.

By an Act of the Legislature, approved April fourth, eighteen hundred and sixty-four, the survey of the eastern boundary of the State was discontinued, and the Surveyor-General was directed to advertise and sell, within twenty days, at public auction, to the highest bidder, for gold or silver coin, all animals, equipments, and fixtures, (with the exception of instruments,) remaining on hand from said survey.

He was further directed, within six months from the passage of said Act, to erect or cause to be erected such additional monuments as were actually necessary, and to mark with suitable monuments the termination of said line near the White Mountains in such manner as to enable the survey to be continued at some future time.

Agreeably to the provisions of this Act, an advertisement was published in the Sacramento Daily Union for the time prescribed, and on the twenty-third day of April were sold, at public auction, all said animals, equipments, and fixtures; from which sale the net sum of one thousand eight hundred and thirty-three dollars and fifty cents was realized and paid into the State Treasury, the instruments purchased being reserved in this office.

On the seventeenth day of May I addressed a letter to John F. Kidder, Esq., then at Ione City, Nevada Territory, who had from the commencement been associated with me in the survey as engineer in charge of party, directing him, as soon as possible after the receipt of my letter, to proceed to the point where the survey was suspended last year and mark the line as required by the Act, and to run connecting lines to the adobe house in the Adobe Meadows. This service was faithfully performed by him, as will be seen by the following report and field notes, at an expense to the State of six hundred and sixty-one dollars.

IONE CITY, N. T., June 14, 1864.

HON. J. F. HOUGHTON,
Surveyor-General, Sacramento, California:

SIR:—I have the honor to submit the following report of work done in connection with the survey of the eastern boundary of the State of California.

In accordance with communication of May seventeenth, containing directions from you that I should organize a party and proceed to the

lower end of the line as established last year, and mark exactly, by drilling two small holes in the rock and erecting over them monuments of stone, two points on the line sufficiently far apart to form a suitable base from which to resume operations at some future time, and likewise to run a connecting line to house in Adobe Meadows, etc., I proceeded, and on the twenty-eighth day of May I started from this place directly to the point, the White Mountains being distinctly visible, and there being apparently a succession of lower passes through the mountain ranges on the course necessary for us to travel.

The first day everything worked favorably and we camped at night at a spring some sixteen miles from here, having started at noon. The next day we were in the saddle by four o'clock, A. M., and rode until three o'clock, P. M., over a desert of mountain and plain, without any show of water—not even an Indian trail or footprint of any description did we cross—when I felt satisfied that to proceed was mere foolhardiness, and returned to the spring, arriving at half-past ten, P. M.

The next day we went to the Hot Springs on the Wellington road, far off of our own course, and there learned that there was a spring on the mountain twenty-eight miles south of there, to which we went on the third day.

On the fourth day we got an early start, descended the mountain and rode some thirty miles without finding any sign of water, and returned to camp, arriving there after midnight with our animals badly used up.

We deemed it best to stay there one day and let our animals recruit, and on the sixth day we made another attempt, and after riding some forty miles in a course varying a little to the left of our former one, we struck an Indian trail and arrived at an alkali spring.

On the seventh day we arrived at an alkali spring at noon, and at night camped on the top of a mountain near a mud puddle formed by a smart shower, where there was good bunch grass; at night it rained continually, making it excessively uncomfortable for all hands, but in the morning there was no water in sight, the pool of the preceding evening having soaked completely away; at noon, however, we arrived at a small spring, and late in the evening camped upon the old Indian camping ground, the scene of the treaty with Joaquin Jim.

In the morning we were visited by several Indians "heap hungry," very glad to see us, remembered us perfectly, said "Capt. Tom" was only two miles from there, etc. We were by this time almost completely out of provision, so we hurried to the point where we left the line last fall, found the last two points completely undisturbed, and as they came upon solid rock, thought it best to drill holes at those points.

Upon measuring the distance carefully between those points we found that there had been an error made last fall, and that the distance was actually thirty-seven chains forty-four links, instead of thirty-five chains seventy-one links, as given in the printed report. After concluding our work at those points, which I can assure you was exactly in accordance with instructions, we ran line to the adobe house at the Meadows; arriving at that point we were unable to procure provision, and the next day went to Aurora, stopping there over night, and returning to this place by Indian trail, crossing the desert near the south end of Walker Lake, and arriving here on the twelfth of June instant, having been absent just fifteen days. I was accompanied on this trip by Mr. James

S. Lawson, assistant on the survey of the boundary line, who performed the work with me, and who will vouch for the accuracy of the same.

I submit with this a copy of the field notes.

I have the honor to remain, very respectfully,

Your obedient servant,

JOHN F. KIDDER, C. E.

FIELD NOTES

Of Survey made June 6th, 1864, to permanently designate points on Eastern Boundary Survey of the State of California.

At one hundred and one miles forty-four chains and seventy-seven links found stake and point, as designated in report of boundary survey; drilled hole one half inch in diameter and four inches deep, two links in advance of stake, directly on boundary line; hole drilled in solid rock forming portion of monument; said monument built five feet high, with base eight feet in diameter; from which a nut pine tree, fifteen inches in diameter, (double tree,) south part, bears south, sixty and one half degrees west, one hundred and thirteen links distant, blazed facing monument; also, a nut pine tree, twelve inches in diameter, bears south, eighty-two degrees east, seventy-two links distant.

From which hole drilled in rock, measured south forty-eight degrees six minutes east, on boundary line, thirty-seven chains forty-four links; and drilled hole in solid rock, one half inch in diameter, and four inches deep; left drill in hole, and built monument of stone four feet high; said monument stands on the northwest edge of a bluff of rocks. Magnetic variation at this point, nineteen degrees east.

From which last hole drilled, a nut pine tree, twenty inches in diameter, bears south, sixty-seven degrees twenty minutes east, fifty-five links distant:

From hole first mentioned, viz: at point one hundred and one miles forty-four chains and seventy-seven links, ran south, fifty-three degrees fifty minutes west, magnetic variation sixteen degrees east, over rolling hills covered with piñon or pine nut trees. One mile forty-eight chains, leave hills and enter Adobe Meadows. Three miles sixty-six chains, alkali lake, course northwest and southeast. Three miles sixty-seven chains twenty-five links, leave lake. Six miles sixty-three chains seventy-three links, northeast corner of adobe house in Adobe Meadows.

JOHN F. KIDDER, Engineer.

On the fifteenth day of August I, having previously corresponded with him upon the subject, wrote to E. R. Nichols, Esq., County Surveyor of Lassen County, who was with the party upon a considerable portion of the line to Oregon, directing him to have cut three stone monuments, six feet in length, four feet of which was to be dressed eight inches square at base, tapering to six inches square at top, with the initials C and N cut upon opposite sides, and to set them at the following points: One at the crossing of the Henness Pass Road, near Bull's Station; one near the Antelope Ranch, and one near John Robinson's, in Long Valley; and, subsequently, learning that the appropriation would permit it, I ordered one to be set at the crossing of the Humboldt Road, near Rush Creek

Station, and one in the southeastern part of Honey Lake Valley, near Coral Rock Springs.

These five monuments were cut ten inches square at the base, instead of eight, as directed, in order to bear transportation, and Mr. Nichols reports them all set at the points indicated for a total cost of two hundred and ninety-five dollars (\$295.)

The field notes of this work, I regret to say, have not reached this office; but as directions were given him to set them, as near as possible, to the temporary monuments at the points named, which are located in the first report of the progress of the work, I apprehend that no difficulty will be experienced in finding them from the description therein contained. Should they be received they will be attached to this report.

The amount permitted to be expended in marking the line was limited by the Act suspending the further survey of the line to one thousand dollars (\$1,000,) of which the work before referred to had exhausted nine hundred and fifty-six dollars (\$956,) and the stone monuments cut and distributed in Lake Valley last year had not been set.

Under the circumstances I addressed a communication to Butler Ives, Esq., the Commissioner on the part of the Territory of Nevada, stating the fact that there was but forty-four dollars (\$44) remaining in the fund for that purpose, and requesting him, as a special favor, to set the monuments for that sum, as I desired to present no bill for deficiency.

The State is under obligations to him for accepting my proposition, and for the faithful performance of this duty, as the following description of the work performed will testify:

DESCRIPTION OF THE CUT STONE MONUMENTS

Established in Lake Valley, on the Boundary Line between California and Nevada Territory.

At thirty-seven chains on the seventeenth mile north from the initial point in Lake Bigler, and in the place of the cedar post set on the north shore of the lake, at the time of the boundary survey, set a monument of Sienitic granite, four feet and eight inches long, with a shaft three feet above ground, dressed ten inches square at base, and eight inches square at top, marked "Cal." on west, "Nev." on east, and "1863" on south side.

On the southern portion of the line, at thirty-two chains and sixty links on the fifth mile from the initial point in Lake Bigler, and in the place of the pine post set on the south side of the lake, set a monument of Sienitic granite, five and a half feet long, with a shaft three and a half feet above ground, dressed ten inches square at base, and eight inches square at top, marked "Cal." on west, "Nev." on east, and "1863" on south side.

At fifty-two chains and fifty links on the fifth mile, on the south side of the road leading from Lapham's Station to the Lake House, and ninety links from the wooden monument erected at time of survey, set a monument of Sienitic granite, six feet long, with a shaft four feet above ground, dressed ten and a half inches square at base, and nine inches square at top, marked "California" on west, "Nevada" on east, and "1863" on south side.

At seventy-three chains and forty links on the fifth mile, two chains and eighty links from the pine post set at time of survey, set a monument of Sienitic granite, six feet long, with a shaft four feet above

ground, dressed ten and a half inches square at base, and nine inches square at top, marked "California" on west, "Nevada" on east, and "1863" on south side.

BUTLER IVES.

EXPENSES OF SURVEY.

The total cost of the survey to the State, as will be shown by the annexed exhibit, is twenty-three thousand and sixty-five dollars and seventy-cents.

Amount of appropriation.....		\$25,000 00
Amount remaining in Treasury.....	\$1,372 30	
Value of instruments on hand.....	562 00	
		1,934 30
		\$23,065 70

EXPENDITURE

Of Five Thousand Dollars placed in hands of Surveyor-General for Contingent Expenses of Survey.

Amount of appropriation.....		\$5,000 00
To which is to be added bill of Rockwell, Coye & Co., twice paid by mistake and returned to me.....		76 00
Expenditures accounted for in last report.....	\$3,800 80	
<i>Since, expended as follows:</i>		
John F. Kidder, feed for train for November, 1863,	70 00	
John F. Kidder, salary for February, 1864.....	350 00	
A. D. Rightmire, bill for stabling.....	32 50	
Rockwell, Coye & Co.'s bill.....	14 25	
Balance unexpended—paid to State Treasurer.....	808 45	
	\$5,076 00	\$5,076 00

STATE LANDS.

The amount of land which has become the property of the State under the various grants is as follows:

Description.	Acres.
Grant of sixteenth and thirty-second sections, about.....	6,755,000
Grant of swamp and overflowed lands, about.....	1,500,000
Grant for internal improvements.....	500,000
Grant for a seminary of learning.....	46,080
Grant for public buildings.....	6,400
	8,807,480
Grant for an Agricultural College.....	150,000
	8,957,480

To this amount must be added the salt marsh and tide lands belonging to the State by virtue of her sovereignty, but their quantity cannot, for obvious reasons, be known.

Up to the date of the present report, these lands have been disposed of as follows:

SCHOOL LANDS.

GRANT OF FIVE HUNDRED THOUSAND ACRES.

How sold.	Acres.
By school land warrants issued prior to the Act of April 28, 1858.....	237,760.00
For cash since that time.....	261,197.83
Total.....	498,957.83

Leaving a balance of one thousand and forty two and seventeen one-hundredths acres, which is reserved as a margin to correct errors in the final adjustment of the grant.

There have been no relocations of any of these lands since the date of the last report.

GRANT OF SIXTEENTH AND THIRTY-SIXTH SECTION.

Amount located upon Sixteenth and Thirty-Six Sections proper.

District.		Acres.
Stockton, surveyed.. .. .	21,154.73	
Stockton, unsurveyed.....	5,280.00	
		26,534.73
Marysville, surveyed.....	21,386.73	
Marysville, unsurveyed.....	3,597.00	
		24,983.73
Humboldt, surveyed.....	3,630.46	
Humboldt, unsurveyed.....	1,240.00	
		4,870.46
San Francisco, surveyed.....	4,240.00	
San Francisco, unsurveyed.....	11,620.00	
		15,860.00
Visalia, surveyed.....		5,939.10
Los Angeles, unsurveyed.....		200.00
		78,388.02
Locations unapproved in above districts.....		4,160.00
Total located.....		82,548.02

The amount of sales of these lands by the Boards of Supervisors, under the Act of April twenty-sixth, eighteen hundred and fifty-eight, so far as they have been reported to this office, is eighteen thousand seven hundred and twenty acres.

LANDS TAKEN IN LIEU OF THE SIXTEENTH AND THIRTY-SIXTH SECTIONS RESERVED OR DISPOSED OF BY THE UNITED STATES.

Districts.		Acres.
Stockton, surveyed.....	19,140.00	
Stockton, unsurveyed	34,172.92	
		53,312.92
Marysville, surveyed	32,894.61	
Marysville, unsurveyed	5,448.50	
		38,343.11
Humboldt, surveyed.....	10,533.64	
Humboldt, unsurveyed	7,600.00	
		18,133.64
San Francisco, surveyed	26,340.00	
San Francisco, unsurveyed.....	179,780.00	
		206,120.00

Visalia, surveyed	80.00
Los Angeles, unsurveyed	6,228.40
Locations unapproved in the above named districts.....	9,860.00
Total	332,078.07

Adding the preceding amount of land located upon the sixteenth and thirty-sixth sections proper, the total amount located under this grant through the Surveyor-General's office is four hundred and fourteen thousand six hundred and twenty-six and nine one-hundredths acres.

The amount relocated during the past year is one thousand four hundred and forty acres.

SEMINARY LANDS.

GRANT OF SEVENTY-TWO SECTIONS.

Locations.	Acres.
Amount of grant.....	46,080.00
Total located at date of last report..... 42,526.82	
Total located since date of last report..... 1,439.00	
	43,965.82
Balance unsold.....	2,114.18

The amount relocated is three hundred and twenty acres.

PUBLIC BUILDING LANDS.

GRANT OF TEN SECTIONS.

Locations.	Acres.
Amount of grant.....	6,400.00
Total located at date of last report..... 5,618.02	
Total located since.....	
	5,618.02
Balance unsold.....	781.98

The amount relocated is one hundred and sixty acres, making the total unsold nine hundred and forty-one and ninety-eight one-hundredths acres.

STATE SCHOOL LAND WARRANTS.

LOCATED UNDER THE ACT OF APRIL 23d, 1858.

Locations.	Acres.
Located at date of last report.....	22,412.00
Located since date of last report.....	160.00
	22,572.00

Under this head should be included the locations of warrants not approved by the Surveyor-General. These amount to a total of six thousand seven hundred and twenty acres, of which five thousand one hundred and twenty acres are within the limits of the City and County of San Francisco. Legal protest has been entered against the approval of all of these locations, and a case referred to one of the District Courts. No approval can now be given except upon a decree of the Court so referring.

STATE SCHOOL LAND WARRANTS.

Located upon unsurveyed lands under Act of April 18th, 1859.

Location.	Acres.
Located at date of last report.....	61,600.00
Located since date of last report.....	3,600.00
Total amount located.....	65,200.00
Deduct amount floated.....	6,240.00
Total located at date of this report.....	58,960.00

The amount floated embraces some cases in which title had been issued and the original warrants cancelled before the float was made. Under the provisions of the twenty-sixth section of the Act of April twenty-seventh, eighteen hundred and sixty-three, the Register of the State Land Office issued his certificates for duplicates of four warrants for

three hundred and twenty acres each, and four for one hundred and sixty acres each, which duplicates were issued by the Governor, and have been delivered to the owners.

SWAMP AND OVERFLOWED LANDS.

Sales.	Acres.
Sold at date of last report.....	687,768.42
Sold since date of last report.....	65,937.21
Total to date of present report.....	753,705.63
Sold during past year..... 65,937.21	
Applied for, but not approved.... 12,926.00	
Total taken up during the year.....	78,863.21
Resurveys of forfeited claims.....	15,078.65
Original surveys.....	63,784.56

SALT MARSH AND TIDE LANDS.

Sales.	Acres.
Sold at date of last report.....	3,732.04
Sold since date of last report.....	8,866.20
Total sold.....	12,598.24

Under the provisions of the nineteenth section of the Act of April twenty-seventh, eighteen hundred and sixty-three, certificates of transfer have been issued to locators of lands which have since proved to be not the property of the State. The amount of these issued up to the date of this report is as follows :

On account of unsurveyed sixteenth and thirty-sixth sections	\$2,516 00
On account of swamp and overflowed lands.....	1,676 90

Some portion of the last has already been received by County Treasurers for purchases of lands of the same class.

The Act of eighteen hundred and sixty-three makes it the duty of the Register to publish lists of such purchasers of State lands upon a credit as are thirty days in arrear for interest, preparatory to bringing suits to annul their certificates of purchase; but there being no appropriation out of which the expense of advertising can be defrayed, no such lists have, until recently, been made out. In June last, one was prepared of the delinquent purchasers of swamp and overflowed lands in Sacramento County, the District Attorney having arranged for its publication. A similar list for Tulare County was published by the parties having charge of the improvement now going on under authority of the Act of March fifteenth, eighteen hundred and sixty-four. At the request of the Board of Swamp Land Commissioners, who will provide for the publication, lists have been already made up for the Counties of Yolo and Solano, and that for San Joaquin is nearly completed. The lists named, although embracing but a portion, and not a very large one, of the cases of default, contain nearly nine hundred names, and as they give in each case the numbers of the survey, and the certificate of purchase, the name of the purchaser, a full description of the land, the amount due, and the number of years default, the preparation and publication involve much labor and expense; and it is much to be desired that at the next session of the Legislature some less cumbrous and more effective form of notice may be legalized.

STATEMENT

Of the Expenditure of all Appropriations (other than salaries) for the Offices of the Surveyor-General and Register, from the 1st of December, 1863, to the 1st of November, 1864.

For What Purpose Expended.	Amount.
Office rent.....	\$605 00
Postage and expressage.....	310 20
Binding books, and contingents.....	189 87
Purchase of maps and plats.....	98 00
Total	\$1,203 07

J. F. HOUGHTON,
Surveyor-General, and Register State Land Office.

Sworn to and subscribed before me, this twenty-eighth day of November, A. D., eighteen hundred and sixty-four.

SAMUEL CROSS,
Notary Public, Sacramento County, Cal.

[SEAL.]

STATISTICAL TABLES.

TABLE OF STATISTICS
Compiled from the Official Reports of County Assessors, for the Year 1864.

COUNTIES.	Acres of Land inclosed	Acres of Land cultivated.....	WHEAT.		BARLEY.	
			Acres.....	Bushels.....	Acres.....	Bushels.....
Alameda	221,300	184,000	12,200	400,000	14,500	420,000
Alpine.....	22,090	1,192	.....	.....	.....	.....
Amador .....	.....	.....	.....	.....	.....	.....
Butte.....	110,000	65,000	18,000	200,000	15,000	250,000
Calaveras	265	.....	.....	.....	.....	.....
Colusa.....	108,000	39,700	7,500	.....	20,000	.....
Contra Costa.....	71,402	43,176	19,500	488,830	9,326	274,878
Del Norte.....	4,750	6,430	.....	.....	.....	.....
El Dorado.....	.....	.....	.....	.....	.....	.....
Fresno .....	.....	.....	.....	.....	.....	.....
Humboldt.....	.....	.....	.....	.....	.....	.....
Klamath .....	.....	.....	.....	.....	.....	.....
Lake.....	31,800	10,000	600	18,000	250	14,000
Lassen.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	49,874	37,115	1,875	.....	11,320	.....
Marin.....	135,000	12,000	3,421	115,260	720	25,000

Mariposa.....	.....	.....	.....	.....	.....	.....	.....
Mendocino.....	.....	.....	.....	.....	.....	.....	.....
Merced.....	46,000	28,000	2,000	20,000	8,000	40,000	.....
Mono.....	5,000	.....	.....	150	.....	1,000	.....
Monterey.....	101,797	14,238	2,524	31,498	8,200	137,854	.....
Napa.....	82,300	32,000	28,650	412,000	1,700	51,000	.....
Nevada.....	23,000	7,000	.....	.....	.....	.....	.....
Placer.....	63,210	18,038	5,497	81,723	3,703	63,482	.....
Plumas.....	.....	.....	.....	.....	.....	.....	.....
Sacramento.....	102,156	43,265	8,565	165,350	13,587	271,740	.....
San Bernardino.....	14,190	10,173	3,710	46,560	1,224	36,720	.....
San Diego.....	4,500	3,000	600	1,000	1,300	20,000	.....
San Francisco.....	18,000	.....	.....	.....	.....	.....	.....
San Joaquin.....	232,660	156,013	53,016	110,269	80,993	166,623	.....
San Luis Obispo.....	.....	.....	.....	.....	.....	.....	.....
San Mateo.....	125,000	40,000	13,000	80,000	2,500	30,000	.....
Santa Barbara.....	5,200	2,100	35	1,000	60	2,200	.....
Santa Clara.....	400,000	175,000	78,000	600,000	20,000	300,000	.....
Santa Cruz.....	66,193	18,294	5,987	164,225	2,976	123,159	.....
Shasta.....	58,500	30,000	6,500	97,500	6,500	162,500	.....
Sierra.....	.....	.....	.....	.....	.....	.....	.....
Siskiyou.....	38,985	9,760	4,944	84,060	1,204	32,351	.....
Solano.....	.....	.....	.....	.....	.....	.....	.....
Sonoma.....	.....	.....	.....	.....	.....	.....	.....
Stanislaus.....	40,708	16,430	5,125	8,400	6,500	24,820	.....
Sutter.....	80,000	30,000	10,000	30,000	12,000	40,000	.....
Tehama.....	50,942	10,748	4,394	55,831	4,609	62,047	.....
Trinity.....	3,740	2,240	652	10,435	35	1,050	.....
Tulare.....	.....	.....	.....	.....	.....	.....	.....
Tuolumne.....	18,973	5,492	129	1,144	307	149	.....
Yolo.....	.....	.....	.....	.....	.....	.....	.....
Yuba.....	178,432	42,540	3,442	25,840	16,420	228,400	.....

TABLE OF STATISTICS—Continued.

COUNTIES.	OATS.		RYE.		CORN.		BUCKWHEAT.		PEAS.	
	Aeres.....	Bushels	Aeres.....	Bushels.....	Aeres	Bushels.	Aeres.....	Bushels.....	Aeres.....	Bushels.....
Alameda.....	8,000	160,000	.....	.....	.....	.....	.....	.....	250	2,500
Alpine.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amador.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butte	500	1,200	100	3,000	200	4,000	.....	.....	.....	.....
Calaveras.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colusa.....	1,000	.....	.....	.....	550	.....	.....	.....	.....	.....
Contra Costa.....	1,892	57,745	.....	.....	18	405	.....	.....	1	12
Del Norte.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
El Dorado.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Klamath .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	200	10,000	.....	.....	15	.....	.....	.....	.....	.....
Lassen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	840	.....	.....	.....	25,850	50,322	.....	.....	.....	.....
Marin.....	4,825	241,300	80	3,200	.....	.....	.....	.....	.....	.....
Mariposa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE OF STATISTICS—Continued.

COUNTIES.	BEANS.		POTATOES.		SWEET POTATOES		ONIONS,		HAY.	
	Acres.....	Bushels.....	Acres.....	Bushels.....	Acres.....	Bushels	Acres.....	Bushels.....	Acres.....	Tons.....
Alameda.....	300	5,000	925	5,000	.....	.....	.....	.....	11,000	15,009
Alpine.....	.....	.....	20	4,000	.....	.....	.....	.....	1,120	370
Amador.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butte.....	.....	.....	.....	.....	.....	.....	.....	.....	8,000	7,000
Calaveras.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,986
Colusa.....	50	.....	.....	.....	.....	.....	.....	.....	10,500	5,900
Contra Costa.....	100	3,000	25	1,425	.....	.....	.....	.....	5,623	6,982
Del Norte.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
El Dorado.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Klamath.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	5	.....	10	.....	.....	.....	.....	.....	600	1,800
Lassen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles .....	.....	1,000	150	300,090	10	500	25	1,250	.....	6,516
Marin.....	.....	.....	2,225	226,000	.....	.....	.....	.....	1,600	3,200
Mariposa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Mendocino.....	100	2,000	120	12,000	35	10,500	10	2,000	1,000	900
Merced.....				8,000		50				4,500
Mono.....	100	75							1,104	2,707
Monterey.....	50	1,690	314	6,478					6,300	7,000
Napa.....		1,000	40	7,000					1,900	2,100
Nevada.....									6,117	5,783
Placer.....	1	15	90	10,650						
Plumas.....										
Sacramento.....	115	4,150	1,225	158,150	425	60,125	800	81,450	11,200	10,550
San Bernardino.....	10	300	18	2,000	1	100	5	550	221	443
San Diego.....										1,285
San Francisco.....	300	8,136	69	2,860	13	3,380	34	7,024	5,770	5,795
San Joaquin.....										
San Luis Obispo.....										
San Mateo.....	2,000	6,000	2,000	100,638			100	1,400	12,000	4,500
Santa Barbara.....	200	12,000		2,100		20	2	200		4,500
Santa Clara.....	100	2,500	650	60,000					10,000	12,000
Santa Cruz.....	1,950	32,607	597	110,638					3,650	6,778
Shasta.....	120	3,000	100	7,500	50	1,800	20	3,000	3,000	3,000
Sierra.....										
Siskiyou.....	10	250	50	7,500			10	400	3,170	3,768
Solano.....										
Sonoma.....										
Stanislaus.....			4	500					4,000	1,550
Sutter.....		500		4,000		500			500	500
Tehama.....	46	1,424	46	6,765	33	20,115	12	1,612	3,405	2,239
Trinity.....		700	150	22,500				200		963
Tulare.....										
Tuolumne.....			16	580					183	149
Yolo.....										
Yuba.....			104	3,162			4	160	20,488	21,840

TABLE OF STATISTICS—Continued.

COUNTIES.	FLAX.		HEMP.		TOBACCO.		ALFALFA.		COTTON.		RICE.		Tons of Beets.....
	Acres.....	Pounds.....	Acres.....	Pounds.....	Acres.....	Pounds.....	Acres.....	Tons	Acres.....	Pounds.....	Acres.....	Pounds.....	
Alameda.....	400
Alpine.....
Amador.....
Butte.....
Calaveras.....
Colusa.....	100	150	.....	.....	.....	.....	.....	.....	5
Contra Costa.....	25	20,000	.....	.....	.....	.....	.....	.....	.....
Del Norte.....
El Dorado.....
Fresno.....
Humboldt.....
Klamath.....
Lake.....	20	.....	.....	.....	.....	.....	.....	.....	5
Lassen.....
Los Angeles.....	65	65,000	200	875	56	2,980	.....	.....	.....
Marin.....
Mariposa.....

TABLE OF STATISTICS—Continued.

COUNTIES.	Wool—Pounds.....	Bee Hives—Number.	Honey—Pounds.....	HORTICULTURAL PRODUCTS—No. OF TREES AND VINES.				
				Apple.....	Peach	Pear	Plum.....	Cherry.....
Alameda.....	15,000	250	.....	25,000	3,000	8,000	7,000	4,000
Alpine.....	.....	.....	.....	.....	.....	.....	.....	.....
Amador.....	160,000	300	3,000	23,000	160,000	8,000	2,145	1,125
Butte.....	16,600	.....	.....	25,335	21,335	3,900	2,324	987
Calaveras	125,550	1,000	75,000	17,500	32,200	2,700	2,500	2,450
Colusa.....	123,536	273	5,460	20,793	16,583	4,314	2,016	2,033
Contra Costa.....	.....	100	.....	3,000	200	1,500	1,300	1,400
Del Norte.....	.....	.....	.....	.....	.....	.....	.....	.....
El Dorado.....	.....	.....	.....	.....	.....	.....	.....	.....
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt.....	.....	.....	.....	.....	.....	.....	.....	.....
Klamath.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	90,000	500	5,000	4,000	1,295	700	512	150
Lassen.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles	297,000	1,100	.....	5,300	4,480	1,560	575	367
Marin.....	26,000	120	5,000	3,800	1,000	300	500	120
Mariposa.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE OF STATISTICS—Continued.

HORTICULTURAL PRODUCTS—NUMBER OF TREES AND VINES—Continued.											
COUNTIES.	Pineapple.....	Prune.....	Persimmon.....	Pecan	Cherimoya	Almond.....	Walnut	Filbert.....	Gooseberry.....	Raspberry.....	Strawberry.....
Alameda.....										40,000	60,000
Alpine.....											
Amador.....											
Butte.....						220			2,365	2,340	450,000
Calaveras.....											
Colusa.....						200	25				
Contra Costa.....		42				149	559		3,908	5,098	4,000
Del Norte.....				15					20,000	50,000	100,000
El Dorado.....											
Fresno.....											
Humboldt.....											
Klamath.....											
Lake.....						182					
Lassen.....											
Los Angeles.....						100	2,784		8,000	19,784	55,000
Marin.....											
Mariposa.....											

Mendocino.....	.....	.....	.....	.....	10	.....	100	2,000	38,000
Merced.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mono.....	.....	.....	.....	.....	.....	96	520	412	950
Monterey.....	.....	183	.....	.....	38	.....	7,000	10,000	1,000
Napa.....	.....	.....	.....	.....	1,200	.....	2,400	6,500	196,000
Nevada.....	.....	.....	.....	.....	.....	.....	1,963	25,786	62,421
Placer.....	.....	.....	142	.....	264	.....	.....	.....	.....
Plumas.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sacramento.....	.....	525	25	120	258	3,500	100	.....	10,000
San Bernardino.....	.....	.....	.....	.....	87	103	.....	.....	.....
San Diego.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Francisco.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Joaquin.....	.....	145	.....	4	484	54	4,248	3,592	8,985
San Luis Obispo.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Mateo.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Santa Barbara.....	.....	.....	.....	.....	600	200	210	280	650
Santa Clara.....	.....	250	.....	.....	670	950	4,900	600	300,000
Santa Cruz.....	.....	.....	.....	.....	22	80	4,602	1,880	29,700
Shasta.....	.....	.....	.....	.....	1,579	365	908	10,665	15,000
Sierra.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Siskiyou.....	.....	.....	.....	.....	.....	.....	5,000	5,000	20,000
Solano.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sonoma.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stanislaus.....	.....	.....	.....	.....	3	.....	.....	300	2,500
Sutter.....	.....	.....	.....	.....	.....	300	100	50	1,000
Tehama.....	.....	20	.....	.....	88	43	381	538	.....
Trinity.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tulare.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuolumne.....	.....	.....	.....	.....	10	.....	91	575	225
Yolo.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yuba.....	.....	.....	.....	.....	.....	.....	3,600	3,800	290,824

TABLE OF STATISTICS—Continued.

COUNTIES.	LIVE STOCK—Continued.								
	Asses.....	Cows.....	Calves.....	Stock Cattle.....	Beef Cattle.....	Oxen.....	Total Number of Cattle..	Sheep	Goats.....
Alameda .....	.....	10,000	4,000	6,009	2,000	1,200	23,200	12,000	.....
Alpine.....	.....	121	.....	1,325	.....	116	.....	1,000	25
Amador.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butte.....	155	5,324	2,500	4,000	1,200	425	13,449	50,000	250
Calaveras .....	.....	.....	.....	.....	.....	.....	5,452	9,329	.....
Colusa	2	6,350	6,110	16,818	.....	295	29,573	88,431	275
Contra Costa.....	15	2,766	1,952	12,662	176	155	17,726	30,884	114
Del Norte.....	.....	259	180	590	120	120	1,170	50	40
El Dorado.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Klamath .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	3	1,100	.....	1,500	.....	.....	.....	11,000	18
Lassen .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	230	3,584	2,690	82,976	.....	1,200	90,450	232,000	2,000
Marin	2	8,250	.....	18,500	1,100	1,140	28,990	10,000	.....
Mariposa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Mendocino.....	4,600	5,300	2,000	500	250	3,000	30,000
Merced.....	50	6,423	66	78	54	9,535	47,025
Mono.....	2,239	16,000	1,200	600	125		
Monterey.....	4,000						
Napa.....	3,220	17,500	887	225	150	6,600	
Nevada.....	6,000						
Placer.....							
Plumas.....	10,000	28,700	6,250	2,450	250		
Sacramento.....	254	40,000	162	250	73	1,740	
San Bernardino.....	213	3,674	18	97	95	1,300	52,000
San Diego.....	7,770					89,325	1,741,837
San Francisco.....	10,086	98,706	7,968	2,168	428	1,826	18,260
San Joaquin.....						234	
San Luis Obispo.....							
San Mateo.....	2,000	6,000	1,000	500	500	1,800	10,000
Santa Barbara.....	1,000	8,000	100	400	24	1,800	7,200
Santa Clara.....	1,000	13,000	1,500	1,000	400		
Santa Cruz.....	1,958	7,296	96	560	100	1,180	14,160
Shasta.....	10,400	11,478	5,070	482	306		
Sierra.....							
Siskiyou.....	4,690	27,965	480	800	200	3,150	37,800
Solano.....							
Sonoma.....							
Stanislaus.....	3,100	4,000	860	375	120	800	
Sutter.....	6,375	15,000	2,100	540	200		
Tehama.....	8,418	20,319	3,173	712	145	827	
Trinity.....	358	1,210	165	249		1,525	
Tulare.....							
Tuolumne.....	1,116	881	70	34			500
Yolo.....							
Yuba.....	5,320	39,642	8,410	814	380		

TABLE OF STATISTICS—Continued.

COUNTIES.	STOCK SLAUGHTERED—Continued.				IMPROVEMENTS.					
	HOGS.		SHEEP.		CRIST MILLS.					
	Number.....	Value.....	Number.....	Value.....	Number.....	Steam power.....	Run of stone.....	Value steam mills.	Water power.....	Run of stone.....
Alameda.....	3,000	.....	3,400	.....	4	3	10	\$28,000	1	3
Alpine	300	.....	2,000	.....	.....	.....	.....	.....	.....	.....
Amador.....	.....	.....	.....	.....	4	1	.....	10,000	3	7
Butte	4,229	.....	2,600	.....	.....	.....	.....	.....	.....	.....
Calaveras.....	.....	.....	.....	.....	2	2	2	.....	.....	4
Colusa	950	\$4,750	1,500	\$2,250	2	2	8	8,000	.....	.....
Contra Costa	250	1,000	75	600	.....	.....	.....	.....	.....	.....
Del Norte.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
El Dorado.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Klamath .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	.....	.....	.....	.....	2	.....	2	.....	.....	.....
Lassen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marin	540	.....	250	.....	.....	.....	.....	.....	2	4
Mariposa .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Mendocino.....	9,400	94,000	4,350	10,870	.....	.....	.....	.....	.....	3	.....	8
Merced.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mono.....	370	2,940	.....	2,975	.....	.....	.....	.....	.....	.....	.....	.....
Monterey.....	.....	.....	1,110	.....	.....	.....	.....	.....	.....	.....	.....	.....
Napa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nevada.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Placer.....	3,424	.....	3,850	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plumas.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sacramento.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Bernardino.....	260	.....	900	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego.....	226	904	1,236	2,472	.....	.....	.....	.....	.....	.....	.....	.....
San Francisco.....	77,666	698,994	97,965	195,930	10	10	.....	.....	.....	.....	.....	.....
San Joaquin.....	925	6,475	1,851	3,702	.....	.....	.....	.....	.....	.....	.....	.....
San Luis Obispo.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Mateo.....	500	2,500	1,500	3,000	.....	.....	.....	.....	.....	.....	.....	.....
Santa Barbara.....	100	100	4,000	4,000	2	.....	.....	.....	.....	.....	.....	.....
Santa Clara.....	.....	.....	.....	.....	21	7	.....	.....	.....	.....	.....	.....
Santa Cruz.....	1,000	10,000	.....	.....	3	1	.....	.....	.....	.....	.....	.....
Shasta.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sierra.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Siskiyou.....	2,400	25,000	1,550	10,850	.....	1	.....	.....	.....	.....	.....	.....
Solano.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sonoma.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stanislaus.....	350	.....	550	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sutter.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tehama.....	2,852	.....	1,016	.....	4	1	.....	.....	.....	.....	.....	.....
Trinity.....	1,425	.....	800	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tulare.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuolumne.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Yolo.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yuba.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....

TABLE OF STATISTICS.—Continued.

COUNTIES.	IMPROVEMENTS—Continued.									
	TURNPIKE ROADS.					RAILROADS.				
	Number	Number of miles in length.....	Cost.....	Income.....	Cost of Repairs...	Number	Miles in length...	Cost.....	Capital Stock of incorporated Companies working in each County.....	
Alameda.....	6	66				2	10	\$250,000	\$70,000	
Alpine.....										
Amador.....										
Butte.....	4					5	13			
Calaveras.....										
Colusa.....										
Contra Costa.....										
Del Norte.....	1	50	\$50,000							
El Dorado.....										
Fresno.....										
Humboldt.....										
Klamath.....										
Lake.....										
Lassen.....										
Los Angeles.....	1	2	8,000							
Marin.....										
Mariposa.....										

TABLE OF STATISTICS—Continued.

COUNTIES.	ASSESSED VALUE OF PROPERTY.				COMPARATIVE VALUE.		
	Real Estate.	Improvements.	Personal Property	Total valuation of Property.	Total valuation as per Report of 1863.	Increase.	Decrease.
Alameda.....	\$3,500,000	.....	\$1,700,000	\$5,200,000	\$3,804,240	\$1,395,760	.....
Alpine*.....	356,527	.....	142,047	498,574	.....	498,574	.....
Amador*.....	.....	.....	.....	2,228,235	2,398,983	.....	\$70,748
Butte.....	1,486,549	.....	1,647,239	3,233,788	3,539,614	.....	305,846
Calaveras.....	1,124,055	.....	1,077,995	2,202,050	2,450,868	.....	248,818
Colusa.....	497,506	\$240,280	808,039	1,545,825	2,593,875	.....	948,050
Contra Costa.....	651,015	388,394	823,299	1,922,708	1,742,492	180,216	.....
Del Norte.....	62,068	94,512	184,705	341,285	317,265	24,020	.....
El Dorado*.....	.....	.....	.....	3,519,737	3,304,780	214,957	.....
Fresno*.....	.....	.....	.....	728,040	803,493	.....	75,453
Humboldt*.....	.....	.....	.....	1,105,075	1,125,700	.....	20,625
Klamath*.....	.....	.....	.....	267,460	224,620	42,840	.....
Lake.....	.....	53,930	256,286	310,216	250,649	59,567	.....
Lassen.....	.....	.....	.....	672,325	.....	672,325	.....
Los Angeles.....	1,204,000	235,000	810,000	2,109,000	1,623,370	485,630	.....
Marin.....	1,147,455	.....	667,879	1,815,334	1,735,169	80,165	.....
Mariposa*.....	.....	.....	.....	1,644,384	1,439,842	204,542	.....
Mendocino*.....	.....	.....	.....	1,393,589	1,161,773	231,816	.....
Merced.....	196,797	133,432	400,832	731,061	843,356	.....	112,295
Mono*.....	.....	.....	.....	135,874	531,950	.....	396,076
Monterey.....	457,182	133,318	524,345	1,134,845	1,395,060	.....	260,215
Napa.....	1,701,684	.....	831,762	2,533,446	2,524,930	8,516	.....
Nevada.....	2,228,260	.....	1,831,203	4,059,463	3,660,613	398,850	.....

Placer.....	1,235,415	1,616,455*	2,851,870	3,071,912	.....	220,042
Plumas*.....	.....	.....	943,812	965,934	.....	2,122
Sacramento.....	725,990	4,939,405	11,389,808	9,575,395	1,814,413	.....
San Bernardino.....	.....	211,988	370,788	370,788	.....	.....
San Diego.....	.....	270,341	518,629	431,989	86,640	.....
San Francisco.....	.....	35,102,770	82,403,488	64,055,350	18,348,138	.....
San Joaquin.....	.....	1,888,305	4,985,565	4,992,492	.....	6,927
San Luis Obispo*.....	9,125	.....	545,210	613,686	.....	68,476
San Mateo.....	.....	456,125	2,675,180	2,302,938	372,242	.....
Santa Barbara.....	.....	.....	54,000	740,000	.....	200,000
Santa Clara.....	1,577,490	1,726,035	6,340,560	6,129,012	211,548	.....
Santa Cruz.....	.....	386,708	1,058,672	1,058,672	.....	.....
Shasta.....	.....	632,053	1,084,293	1,088,702	.....	4,409
Sierra*.....	.....	.....	2,097,875	2,524,406	.....	426,531
Siskiyou.....	.....	1,020,600	1,476,124	1,498,192	.....	22,068
Solano*.....	.....	.....	3,215,832	3,696,043	.....	480,211
Sonoma*.....	.....	.....	3,960,905	3,678,016	282,889	.....
Stanislaus.....	5,175	476,409	824,152	763,212	60,940	.....
Sutter.....	1,065,817	873,777	1,939,594	1,913,759	25,835	.....
Tehama.....	291,020	923,720	1,566,453	1,552,398	.....	45,945
Trinity.....	241,242	412,102	673,344	861,128	.....	187,784
Tulare*.....	.....	.....	1,306,380	1,085,982	220,398	.....
Tuolumne.....	15,322	564,835	908,087	1,867,042	.....	958,955
Yolo*.....	.....	.....	2,204,487	2,458,067	.....	253,580
Yuba*.....	.....	.....	4,310,364	4,485,192	.....	174,828
Totals.....	.....	.....	.....	.....	\$25,920,821	\$5,510,004
Total increase.....	.....	.....	.....	.....	5,510,004	\$20,410,817

* No report from County Assessor. Valuation for this year taken from Controller's Report made up since the subsequent assessment, and the comparison with the former years, gives an excess of increased value.

APPENDIX.

REPORTS OF COUNTY ASSESSORS.

COLUSA COUNTY.

E. McDANIEL.....County Assessor.

ASSESSOR'S OFFICE,
Colusa, September 26th, 1864. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—Herewith I submit my report as County Assessor of Colusa County for the year A. D. eighteen hundred and sixty-four.

It has been almost a matter of impossibility for me to obtain a correct statement of the agricultural interest of the county this year, or a correct statistical report, on account of the extreme drought in this county. It was nearly impossible to find a man at home on his ranch this season; they were all on the hunt for their stock; feed was failing, and they were obliged to move them to localities where it was more abundant. There was not feed enough in this county to keep the stock till June; consequently, it has nearly all left the county, and if it does not return in the spring, our assessment will be smaller next year than it ever was in this county before. You will see from the report that I assessed about all the stock before it got out of the county. You will see there is not much difference from last year. There have been no improvements since last year, in this county, and there will be none this year.

I do not think the people will be able to more than pay their taxes and buy their seed and feed this year, without making any improvements; there are very few farmers in the county who raised seed and feed; I do not think there was more than twenty thousand bushels of grain threshed in the county this year. All the soil in the county is susceptible of the highest cultivation, and all that is wanting to make this one of the best agricultural counties in the State is irrigation; and I think that is a matter of great importance, and one which the people of this great Sacramento Valley should look to hereafter for their

own good and that of the State. There has been a great deal said about irrigating this valley, and I think there might be great improvements made in it. There are multiplied thousands of acres of the best quality of land in this county lying waste for want of irrigation, and the land all lies so that it can be irrigated from some creek or river. There is a large strip of Colusa County, about thirty miles long and from five to twelve miles wide, lying between the Sacramento River and Butte Creek, that contains some of the best land in the county, and there are scarcely one hundred and sixty acres but what could be easily irrigated, either from the creek or the river; and on the west side of the Sacramento River is some of the best farming and grazing land in the State, which might be irrigated either from Stony Creek or the Sacramento River. And all the land of this large section of country might be made worth from five to ten dollars per acre if it had irrigating privileges.

There is not much of this county that can boast of timber land, although we have some that is very good in some portions of the county. On each side of the Sacramento River there is a strip of timber from one to two miles wide that might be called tolerably good; and on the extreme western border of the county there is some of the best of timber, such as pine and cedar. There is one sawmill in that portion of the county which cuts considerable lumber, but I could not ascertain the amount cut annually.

There is not much mining done in this county yet; but we think we will have one of the richest copper mining counties in the State when we get our mines thoroughly opened. There is a large strip of this county, some forty or fifty miles in length, in which rich copper ore has been found, and there have been thirty or thirty-five companies incorporated, and are at work taking out some very rich ore. I think the richest copper ore I ever saw came from these mines; and from the present prospect, I think Colusa County will have the richest copper mines in the State when they are properly opened.

In relation to the swamp and overflowed land, I cannot say much about it this season; the land is all dry, or nearly so. There is some land in the southern part of the county called swamp land, which is very good, and, I presume, has all been surveyed. The County Surveyor's report will give you more information in regard to it than I can.

Sir, I subscribe myself yours, truly,

E. McDANIEL,
County Assessor of Colusa County.

BUTTE COUNTY.

J. D. GIVENS.....County Assessor.

ASSESSOR'S OFFICE,
Oroville, October 12th, 1864. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—I herewith inclose statement of agricultural and other statistics of Butte County, compiled from the assessment books for the year

eighteen hundred and sixty-four; as also an abstract of the assessed value of real and personal property, with the amount of taxes levied thereon.

Farmers, generally speaking, have not reaped over half a crop, owing to the dry season. The several branches of industry, to wit: agriculture, mercantile, and mining, appear to be in a prosperous condition.

Fruit growing increases gradually every year; the facilities for the cultivation of the grape vine in this county, in many localities, are good, and some of the different classes are as good as any raised in the State.

The mercantile business in this county is in a prosperous condition, and the trade with Oroville is still progressing; and, as we have a railroad completed to Oroville, connecting with tide-water, we have no doubt of future prosperity.

Within the last year we have had considerable improvements made in the county, in good buildings, the most of which have been in the Towns of Oroville and Chico.

The principal seats of mining enterprise are at Thompson's Flat and Cherokee Flat. In quartz there are but few claims being worked with success.

The number of miles of boundary necessary to be run is about twelve, being the line between Butte and Colusa counties.

Of electro-magnetic telegraph we have but one, length about fifty-four miles, valued at three thousand dollars.

We have thirteen miles of railroad in this county, valued at one hundred thousand dollars.

Of the timber in the county the greater portion is cedar and pine; oak is to be found in the valleys.

The assessment the present year you will see has been decreased since eighteen hundred and sixty-three, owing to a great deal of stock being driven to other counties by the passage of a fence law by the last Legislature.

I am, sir, yours, very respectfully,

J. D. GIVENS,
Assessor Butte County.

CONTRA COSTA COUNTY.

PHILIP SAGE County Assessor.

PACHECO, Contra Costa County, }
October 7th, 1864. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—Inclosed please find my statistical report of this county for the year eighteen hundred and sixty-four. There has been a great loss of stock of all kinds in this county the past year, on account of the prevailing drought. Also the grain crop for this year is not more than one fourth the usual crop in ordinary seasons. The coal interest in this county is one of our most important interests, the relative importance of which for the State, in a manufacturing and commercial point of view,

are of the greatest importance. The coal field of this county is about twenty miles in length by one mile in breadth. There are at the present time five companies engaged in extracting the coal, who shipped last year about seventy thousand tons—which will be largely increased this year. And there are three more companies that have reached the coal, and are preparing to take out coal and ship it. You will observe that there is a marked increase in the value of property in this county, which may in good part be attributed to the development of our coal fields.

I shall make a supplemental assessment for this county, which I will transmit to you as soon as the same shall be equalized by the Board of Equalization.

Yours, very truly,

PHILIP SAGE,
Assessor of Contra Costa County.

DEL NORTE COUNTY.

GEO. W. RUSSELL.....County Assessor.

OFFICE COUNTY ASSESSOR,
Crescent City, Del Norte County, August 6th, 1864. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—Herewith I forward you my report as Assessor of Del Norte County for the year eighteen hundred and sixty-four. My report is as full as I could possibly make it, owing to the difficulty of obtaining the information required, and have given you such figures as can be relied upon. Our assessment list shows a slight increase over the figures of last year, and although dull times are upon us at present, we have hopes of a brighter future.

Very respectfully, yours,

GEO. W. RUSSELL,
County Assessor.

LAKE COUNTY.

NICHOLAS PHELAN.....County Assessor.

LAKEPORT, Lake County,
November 2d, 1864. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In compliance with your circular, I submit this, my first annual report, for the year eighteen hundred and sixty-four, which is as full as

I have been able to ascertain by diligent investigation, although not as full as desired. Still, it is not far from correct. There has been considerable increase in the various products of the county over last year; and one fact is noticeable, that property in this county has not been assessed higher this year than last, and in some cases not so high.

The total valuation of property for the year eighteen hundred and sixty-three was two hundred and fifty thousand six hundred and forty dollars; that of eighteen hundred and sixty-two was three hundred and thirteen thousand two hundred and forty-six dollars, while that of the present year amounts to three hundred and sixty thousand eight hundred and seventy-three dollars, being an increase for eighteen hundred and sixty-four to the amount of one hundred and ten thousand two hundred and twenty-four dollars over eighteen hundred and sixty-three, and forty-seven thousand six hundred and twenty-seven dollars over eighteen hundred and sixty-two.

Most of our farmers are turning their attention to raising American horses. Among those I may mention J. P. Thompson and Washington Warden.

There is a very rich quicksilver mine in this county, but the exact amount of ore which it produces per day, I am not able to state, for the simple reason that I could not get the desired information.

There are also several copper leads in the county, which, for want of capital, cannot be properly developed at present.

This county has many disadvantages to labor under at present. The best portion of it is supposed to be covered by a grant, which keeps most of the settlers from improving their farms in a more thorough manner.

I am, sir, yours, most respectfully,

NICHOLAS PHELAN,
County Assessor.

MERCED COUNTY.

L. P. WILSON..... County Assessor.

ASSESSOR'S OFFICE, SNELLING, July 26, 1864.

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In complying with the requirements of the circular sent me from your office, I would suggest the improvement of the boundaries of our county by extending it on the north to the Tuolumne River.

The present line between Merced and Stanislaus Counties, is "on the dividing ridge between the Merced and Tuolumne Rivers," which is supposed to be some four or five miles from the latter river. This dividing ridge can be followed in the foot hills, but on the plains it is impossible to define it, consequently we have no established line between the two counties. The proposed change would extend our county only four or five miles further north, taking in the Village of Lagrange, and some fifteen ranches situated on the south side of the Tuolumne River.

The inhabitants of that portion of Stanislaus County which the pro-

posed change would place in this county, are favorable to the proposition. They now have to travel from eighteen to twenty-five miles, and cross two rivers—the Tuolumne and Stanislaus—to get to Knight's Ferry, the county seat of their county. Whereas, if they were annexed to this county, they would have no rivers to cross, and not more than two thirds the distance to travel to attend to their county business.

This proposed change would be a great advantage to our county, could be no injury to Stanislaus, and would give us a natural instead of an artificial boundary. By reference to the map you will not fail to see the advantages of this change.

At a late day of the last session of the Legislature, many of our citizens petitioned that body for an appropriation to survey and report upon the feasibility of running a canal for irrigating purposes, from a point on the San Joaquin River, some fifteen miles above the Lone Sycamore in Fresno County, along the foot hills, to near the Merced River, a distance of about fifty miles. That body failed to make any appropriation, and I have thought proper to call your attention to the proposed improvement. A canal through the section of country mentioned, would irrigate some two hundred thousand acres of now worthless lands, making it as valuable as any of the lands of this county.

Some thirty thousand acres of this land belong to the State; the remaining one hundred and seventy thousand belonging to the General Government. The country through which the canal would pass is naturally well adapted to such a project, being almost a level plain; and it is believed that the expenditure necessary for such improvement would be but small compared with the advantages to be derived from it, and that it is only necessary that the attention of the proper authorities should be directed toward it, and an examination and survey made, to insure its being regarded favorably.

Such an improvement would be of almost incalculable value to this portion of the State, and a source of much revenue; for without irrigation, this land must remain barren and worthless, when it could be made to produce equal to the best lands in the State, and nearly every acre of the two hundred thousand could be cultivated.

You will see by reference to the accompanying documents that the cultivated land in this county is twenty-eight thousand acres, and the total value of property a little more than three quarters of a million, giving to the State a revenue of more than nine thousand dollars. Now, if this proposed canal would add say one hundred thousand acres to the arable lands of the county, and our wealth increase in proportion—and I see no reason why it would not—our valuation of property would be about four millions of dollars, and we would pay a State tax of near fifty thousand dollars.

The past dry seasons have proved to the farmers in this section of the State that they cannot depend upon rains, and must resort to irrigation, or abandon their farms, which many are already doing. Nearly all the grain, fruit, etc., which I report to you as having been raised in this county, is the product of farms situate on the Merced River which have irrigating privileges. Though the lands in other portions of the county are equally as rich and productive in favorable seasons, yet in such a season as the present they produce nothing, and are being abandoned. Many of the best improved farms in this county, and which are, in seasons like this, worthless, would be benefited by this proposed canal.

Unless some steps are taken to secure irrigation, the agricultural wealth

of this portion of the State must diminish instead of increase, and many well improved farms be again returned to the commons.

I am satisfied that if you could have an examination of the country through which this canal would pass, you would be impressed with the importance and feasibility of the project.

INTERNAL IMPROVEMENTS

There are some thirty-six miles of the San Francisco and Los Angeles telegraph in this county. Of its cost, value, etc., I know nothing. Further than this, there are no internal improvements in the county, except those already reported in the accompanying documents.

I am, with much respect,

Your obedient servant,

L. P. WILSON,
Assessor Merced County.

MARIN COUNTY.

DANIEL SMITHCounty Assessor.

COUNTY ASSESSOR'S OFFICE,
San Rafael, Marin County, October 3d, 1864. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—I herewith inclose a statement of the agricultural and other statistics of Marin County, compiled from the assessment books for the year eighteen hundred and sixty three.

Farmers, as a general thing, have reaped an average crop in this county. A good part of the county is better adapted for grazing than tillage, but the northern end cannot be surpassed in the State for farming purposes, and farmers this year have made fortunes.

We have had considerable improvements within the last year, but we are still sadly deficient in roads; it is hoped, however, that this will soon be obviated.

Fruit growing has not had much attention as yet, and but one good sized orchard is to be found in our county.

Butter and cheese making is carried on extensively and with remunerative results.

Mining has, for the last year, occupied the attention of some of our people. The mines are situated near the coast, and a fair prospect of copper is obtained.

But of these matters the County Surveyor, no doubt, will make you acquainted. The statistics are as near as I could get them, but they, probably, are not perfect.

The schools in this county are well attended, and a manifest improvement is to be seen.

The amount levied for State purposes is twenty-two thousand six hundred and ninety-one dollars and fifteen cents. The amount levied for county purposes is twenty-seven thousand two hundred and thirty dollars and fifty-four cents.

Your humble servant,

DANIEL SMITH,
Assessor of Marin County.

MONTEREY COUNTY.

WM. J. McGARVEY.....County Assessor.

ASSESSOR'S OFFICE,
Monterey, October 18th, 1864. }

Hon. J. F. HOUGHTON,
Surveyor-General:

Sir:—In compliance with the requirements of your circular directed to the County Assessors, I herewith transmit to you my statistical report for the current year, containing such information as I could, by due diligence, collect from reliable sources, and as taken from the assessment roll, with some general observations tending to show the condition of this county and develop its resources.

In order to avoid repetition I have omitted to mention matters reported on before, and having undergone no change; if any information is wanted on such, I refer to the report of some previous year, viz: eighteen hundred and fifty-nine or eighteen hundred and sixty.

AGRICULTURAL PRODUCTS.

Description.	Acres.	Bushels.
Land inclosed.....	101,797	.....
Land inclosed, used for pasture.....	86,472	.....
Land cultivated	14,238	.....
Wheat	2,524	31,494
Barley	8,200	137,854
Oats	50	910
Corn.....	180	3,324
Potatoes.....	314	6,478
Peas, Beans, and Vegetables.....	157	2,179
Buckwheat.....	2	32
Hay.....	1,104	2,707
Alfalfa	38	.....

The above table of agricultural products is for the year eighteen hundred and sixty-three.

The time and compensation allowed to the Assessors for performing their official duties being rather insufficient to enable them to collect material for a report as detailed and correct as could be desired on this interesting subject, they must content themselves with compiling from very incomplete, and sometimes erroneous, information, (true and exact statements not being on all occasions cheerfully given to them,) and make returns that will not convey much useful knowledge nor be of interest to the State at large—aware of the fact that the aim proposed by the legislation demanding from them statistical reports is not attained.

FRUIT TREES.

Description.	Number.
Apple	1,682
Peach.....	1,799
Pear.....	1,732
Plum	388
Cherry.....	247
Nectarine.....	312
Quince.....	114
Apricot.....	470
Fig.....	67
Olive.....	28
Almond	96
Pomegranate	9
Walnut.....	38
Prune.....	183
Grape Vines.....	85,275
Total Fruit Trees.....	7,165

The yield of fruit last year has not been unsatisfactory. This article is chiefly cultivated for our own use, but a small quantity of fruit is raised for the market; I have, therefore, not been able to determine its value. Much fruit is imported from other parts.

LIVE STOCK, &C.

Description.	Number.
American stallions.....	22
American horses.....	145
American mares.....	124
American colts.....	111
Half-breed horses.....	183
Half-breed mares.....	74
Half-breed colts.....	197
Spanish horses.....	1,545

Spanish mares.....	1,636
Spanish colts.....	933
American mules.....	29
Spanish mules.....	116
Asses.....	10
American cows.....	1,067
Half-breed cows.....	58
Spanish cows.....	444
Calves.....	486
American stock and beef cattle.....	4,359
Half-breed stock cattle.....	9,798
Spanish stock cattle.....	19,506
American work oxen.....	48
Spanish work oxen.....	79
American and improved sheep.....	42,335
Half-breed and mixed sheep.....	111,076
Spanish sheep.....	18,499
Goats.....	94
Hogs.....	2,239
Turkeys.....	66
Geese.....	54
Ducks.....	78
Chickens.....	6,423
Bee hives.....	365

CATTLE SLAUGHTERED.

Description.	Number.	Value.
Beef and stock cattle.....	9,535	\$47,025
Sheep.....	1,110	2,975
Hogs.....	370	2,940

The foregoing account of live stock is taken from the assessment roll of the present year. The cattle slaughtered is for the year eighteen hundred and sixty-three. The small value set on the same may be accounted for by the fact that a "matanza" has been established in the vicinity of Monterey City, where eight thousand head of cattle have been slaughtered for hides and tallow. These were valued, at an average, at three dollars per head. A large number of said cattle were in bad condition, owing to the scarcity of pasture, and had to be sacrificed in order to save some other stock. I make no mention of the cattle killed in the country by the stock raisers for their own use, neither of a large number of cattle, in a starving condition, killed in order to save the hides.

During the two last years, owing to the prevailing drought, the cattle have considerably diminished in this section of the country; and although the loss has not been so severely felt here as in the more southern counties, where, according to report, the cattle have almost all died, the

amount of stock that will hold out till next spring will be very small. The hills and valley lands are already entirely destitute of pasture; on the mountains alone some browsing is still left, and there the cattle and horses are now ranging.

Horses have held out better than cattle, and the distemper called the Salinas horse disease (somewhat like the blind staggers) has not made its appearance this year; but there are still several horses suffering from the effects of this distemper, contracted last year, or even before that. They never recover altogether therefrom.

The loss of sheep has not been great until now, but it is expected that they also will suffer considerably next winter. Since the last five years sheep have increased, and if the cattle perish this winter, as is expected, their place will be supplied with sheep. This country possesses some of the best localities for raising them. Considerable pains have been taken during these last years for improving their breed, by persons having at command the means to import rams at a heavy cost of price, and the result has been such as to reward them amply for their trouble and outlay.

The following shows the decrease or increase of live stock since the year eighteen hundred and sixty:

Description.	Number.
American horses.....	38 increase.
Spanish horses.....	2,549 decrease.
Half-breed horses.....	228 decrease.
American mules.....	6 decrease.
Spanish mules.....	45 decrease.
American cows.....	569 decrease.
Spanish cows.....	2,164 decrease.
Half-breed cows.....	298 decrease.
American stock cattle.....	3,356 decrease.
Spanish stock cattle.....	31,643 decrease.
Half-breed stock cattle.....	6,138 increase.
Sheep.....	72,360 increase.
Hogs.....	2,077 decrease.

GENERAL PRODUCTS—1863.

Description.	Quantity.
Butter.....	11,950 lbs.
Cheese.....	11,540 lbs.
Honey.....	1,817 lbs.
Wine.....	1,200 galls.
Wool.....	540,835 lbs.
Eggs.....	19,906 doz.
Pear brandy.....	600 galls.

ASSESSMENT OF PROPERTY—1864-65.

Description.	Amount.
Value of real estate.....	\$457,182 55
Value of improvements.....	133,318 00
Value of personal property.....	544,345 21
Total value of property assessed.....	\$1,134,845 76
Deducted for widows.....	9,000 00
Value of taxable property.....	\$1,125,845 76
Value of taxable property in 1863.....	1,256,797 00
Decrease.....	\$130,951 24

FARMING.

The crops in eighteen hundred and sixty-three, with few exceptions, have been very light, and the harvest has generally been considered as far below the average; but still there is a great difference between then and the present year. The country everywhere presents a desolate appearance; much land has been left without cultivation for want of sufficient moisture to render it fit for ploughing, and in the Pajaro Valley, one of the most fertile spots in this State, the farmers this year did raise about the necessary grain for seed.

Much inclosed land has been used for pasture, and some hay has been cut on such places, which has brought a good price. Barley hay at present is sold at thirty dollars per ton.

No lumber has been produced last year; the only steam sawmill in Monterey has stopped working; the export of cord wood has likewise greatly diminished. There is at present on the stocks one vessel, in progress of construction. She is about one hundred and fifty tons burden.

FISHERIES.

There are four whaling companies in the Bay of Monterey. They number some sixty men. Each company mans two boats. Last year, sixty-four whales were caught, which produced one thousand nine hundred and thirty barrels of oil. Whales have been rather scarce this season. The whalers consider these last two years as the worst ever had here.

One whaling schooner belonging to this port is cruising on this coast between latitude twenty-nine degrees and thirty-seven degrees.

Several companies of Chinese are established here, who occupy themselves in curing and salting fish for exportation. They yearly send to China large quantities of dried fish, and a certain univalve shellfish, (*Haliotis Occidentalis*,) commonly called in the Spanish language, "Aulon." This shellfish, formerly in great abundance, was a certain resource for the indigent to fall back on, supplying them in case of need with nutritious and wholesome food. But the Chinese have almost

exhausted the same along the whole coast between Monterey and San Diego. The want of this supply will be felt severely this year in some of the lower counties.

The mode of fishing of the Chinese is likewise so destructive that the rockfish, cod, etc., are also fast disappearing.

FERRIES, TELEGRAPHS, ETC.

There are three ferries over the Salinas, and one over the Pajaro River. But of these only one is permanent, and this is at the mouth of the Salinas, on the line of travel from Monterey to Watsonville; the others are not needed during the dry season.

One toll bridge crosses the Pajaro River on the line of travel from San Juan to San José.

The telegraph line connecting Monterey, Watsonville, San Juan, etc., is of the extent of forty-nine miles in this county.

Two newspapers are published in this county—one in Monterey City, the Monterey Gazette, and one in the town of San Juan, the Monterey County Journal. Both are weekly.

MINERAL LANDS.

Since the last two years many mining claims have been taken up, and some companies incorporated, among them the Gabilan, Saragoza, Soberana Maria, and Buri-Buri. The two first named are located on the Gabilan Range, the third in the San Antonio Mountains, and the last among the hills on the southern slope of the Gabilan. The results of the working have until now not been such as to deserve notice, and therefore I will pass this matter over, and leave the same for my next year's report, when perhaps I will be able to state some positive facts in relation to the working and yielding of the mines aforesaid. The general impression is that the Gabilan (silver mine) and Buri-Buri (copper mine) hold forth the best hopes. A mill has been erected, and great activity prevails at the former. At the last named the works have for the present been suspended.

All of which is respectfully submitted,

WM. J. MCGARVEY,
Assessor, Monterey County.

Per J. RUNEDS, Deputy.

METEOROLOGY.

Abstract of Meteorological Observations, by Dr. C. A. Canfield, at the City of Monterey, from October 1, 1863, to September 17, 1864.

LATITUDE 36° 36'.

LONGITUDE 121° 52'.

	October, 1863...	November, 1863	December, 1863	January, 1864	February, 1864	March, 1864....	April, 1864	May, 1864.....	June, 1864.....	July, 1864	August, 1864...	Septem., 1864*
Greatest heat at 2 P. M., Fahrenheit	83	77	66	73	74	74	84	76	76	71	77	72
Greatest cold from 7 A. M. to 9 P. M., Fahrenheit.....	45	40	33	40	39	44	41	50	52	53	55	51
Average heat at 2 P. M., Fahrenheit	69	61	58½	60	63½	60½	65	64½	65	65½	68½	68½
Number of nights of frost.....	0	7	7	4	5	0	1	0	0	0	0	0
Number of days without clouds...	4	5	1	2	9	3	6	0	1	0	0	1
Number of days completely clouded	1	0	3	3	0	3	0	8	4	3	6	1
Amount of rain in inches and hundredths.....	0	2.00	0.67	3.65	0.04	1.58	1.23	1.35	0.06	0	0.08	0
Number of days with south or southwest winds.....	9	7	8	5	4	15	14	21	8	15	19	10
Number of days with north or northwest winds.....	17	15	14	21	15	12	16	9	13	6	3	2
Number of foggy mornings.....	6	3	3	4	6	2	7	7	8	7	9	2
Number of foggy evenings.....	5	3	4	4	5	3	4	5	7	14	11	8
Fog all day, number of days.....	1	0	1	2	0	0	1	3	1	8	3	2

* To 17th only.

PLACER COUNTY.

WALTER B. LYON.....County Recorder.

RECORDER'S OFFICE, Placer County, }
Auburn, October 19, 1864. }Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—Inclosed you will please find report, filled up as per blank form sent to this office for County Assessors to compile. This county being divided into ten Assessor Districts, and some of the Assessors having been very remiss in the discharge of their duties, I found it very difficult to obtain anything like a correct data to go by in making this report. I am of the opinion that it is very nearly correct, although not as full as it should have been.

Very respectfully, &c.,

WALTER B. LYON,
Recorder of Placer County.

SANTA BARBARA COUNTY.

AUGUSTIN TANSENS.....County Assessor.

September 30, 1865.

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—The County of Santa Barbara has probably suffered more than any other from the excessive drought of eighteen hundred and sixty-three and eighteen hundred and sixty-four. The horned stock and horses have died in great numbers, and in the present month of October at least two thirds of that class of animals have perished from want of pasture and the ravages of bears and lions. How many more may die before the grass becomes sufficiently sustentative in the spring of eighteen hundred and sixty-five, depends on the early rains of the incoming season. Nearly all the young under a year old have already perished. The mortality and loss among sheep has not been so great, but the increase nearly all died. It is estimated that one third of the numbers existing in eighteen hundred and sixty-three have been lost by hunger, nostolagia, removals, and the destructive animals, who have been unusually bold and daring during the last twelve months. The clip of wool has also been much inferior to that of eighteen hundred and sixty-three or eighteen hundred and sixty-two. The losses entailed on the rancheiros have been ruinous, as the affliction of the drought came at a time when the market was in a terribly depressed state from over-abundant supplies, combined with the debts of preceding years, the great scarcity of money, and the great fall in price of all animals. From a combination of these causes, stock owners were obliged, at immense sacrifice,

to pay off debts contracted when cattle were selling at from twenty dollars to twenty-five dollars, by selling the same animals at from four dollars to six dollars; in consequence of which many persons have been reduced from comfort, or comparative affluence, to great distress and even, in many cases, want. Very little land has been in successful cultivation, as the winds and storms of sand prevailing in the spring and summer, combining with the drought, in almost every instance blasted the hopes of the cultivator. Even fodder for horses has been obliged to be brought from abroad; and, except in a few choice localities, not even garden vegetables have escaped. Near San Buenaventura the old irrigating ditch of the Mission, laid out before eighteen hundred and twenty-five, has been repaired for several miles, which enabled the settlers in that vicinity to cultivate successfully some four hundred or five hundred acres of land with barley, corn, potatoes, and other crops, which yielded abundantly, and remunerated the farmers handsomely.

There are over fifty thousand bearing vines in the Old Mission and private vineyards of the county, which were planted before eighteen hundred and twenty-five, and have always yielded an exceedingly fine red wine of excellent body and quality. If these vineyards were in the hands of capitalists and competent cultivators, there can be no doubt that their product of wine and brandy would be equal to the best of Spain, France, or Italy. The fruit is very abundant, sweet, and easy of growth; and there are large quantities of land admirably adapted in soil and climate to compete with the vine lands of Southern Europe.

The olive succeeds admirably; there are now, at least, not less than one thousand trees forty years old in the gardens of the founded Missions of the county. The oil and olives they yield are, in every respect, equal to those of Spain. The fig, peach, pomegranate, quince, walnut, almond, pear, plum, cherry, and, indeed, every fruit and vegetable of the Mediterranean, succeed as well in this county as in their native soil—some of them greatly improve. The maguey, or American aloe—so common in Mexico as producing the liquor called pulque, and the leaves of which are there so extensively used in the manufacture of rope and paper—grows luxuriantly wherever planted, and comes to perfection in six years, and not, as it does in the Northern States and Europe, in a hundred; hence its vulgar name of century plant. The root of this plant, when washed and fermented, furnishes the Mexican spirit called mes-cal, which is the same as our whiskey in flavor, and greatly improves by age. The common cactus plant, or nopal tuna, of Mexico, also grows very abundantly here, and yields excellent fruit. It is very desirable and its growth should be encouraged in the mining counties, as it is hardy and is not effected by drought. Cotton and tobacco, wherever planted here, have grown admirably, and large tracts of land could be cultivated in those products.

There is a large extent of very fine land in the valley of the Staticos, or Santa Clara River, which is now occupied by pasture ranchos; and, also, equally as much in the lower part of the Valley of Santa Inez, near the sea. Several large tracts have been disposed of at very low prices, and there is no doubt the investments are amongst the most secure and certain of any in the State. The low prices at which ranch lands can now be bought offers great inducement to capitalists who have large flocks of sheep. No other county in the State offers a climate superior to Santa Barbara for this valuable class of stock, and the pastures are excellent in quantity. Indeed, for many years cattle will be so few in number that the county will be able to maintain with ease several million head of

sheep at very little expense or trouble. Nearly all the county is underlaid with asphaltum or mineral pitch, which exists in all forms and consistencies—from that of liquid oil to the consistency of tar or putty, or the hardness of stone. There is not a district or county in the State where it is so abundant, or so easy to work, or for the purpose of export. Much of it lies immediately on the ocean coast, half a mile from ship anchorage. A wealthy company of San Francisco capitalists made large investments in asphaltum deposits in eighteen hundred and sixty-four, which it is designed soon to work on an extensive scale.

AUGUSTIN TANSENS,
County Assessor of Santa Barbara.

SANTA CLARA COUNTY.

D. M. HARWOOD.....County Assessor.

ASSESSOR'S OFFICE, San José,
Santa Clara County, October 27th, 1864. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—Inclosed please find my statistical report for this year. There has been some falling off in live stock since last year—as much has been driven from the county in search of grass, while some has died for want of the same.

AGRICULTURE.

There is in this county a large proportion of arable land, which, in favorable years, produces most abundantly of the cereal crops, but the two past seasons have been so dry and unfavorable that many farmers are becoming disheartened and farming interests are being somewhat neglected; but as a portion of the valley produced largely, even this year, (the dryest of all) by irrigating by means of artesian wells, or otherwise, where such means were available—and where such means were not at hand, by the process of summer fallowing the ground, which latter process is rapidly gaining in favor on the uplands of the valley.

IN FRUIT AND VINE GROWING

There is even more interest manifest. It has been ascertained that the climate of this valley is as well adapted to fruit culture as any of the coast valleys. Also, the culture of the vine, so far as it has been tested, has proved a remarkable success.

MINERALS

In minerals, we have not much to boast of, except quicksilver, of which there are in this county three mines tolerably well developed. Standing

first and foremost is the famous New Almaden mine, which is turning out weekly large amounts of the valuable metal, and still the mine improves in richness and product. The second in importance is the Guadalupe mine, situate only four miles from New Almaden, which was lately transferred by the Baltimore Mining Association to a New York company, who are now prosecuting the work vigorously, under the superintendence of Dr. J. E. Mayo. They have lately struck very rich ore in their sixth level, four hundred feet below the bed of the creek, which is worth sixty-five per cent in quicksilver, together with a slight sprinkle of copper and silver. They have also found good ore in a hill near their town and works. The company expect soon to realize dividends. The third in order is the Enriquita mine, situated half way between Gaudalupe and New Almaden, and owned by the same company as the latter, viz: the Quicksilver Mining Company of Pennsylvania, all of which they purchased last year, together with the two mountain ranchos of San Vicente and Las Capitancillos, for the sum of one million seven hundred and fifty thousand dollars; gold coin of the United States.

There has been of late considerable excitement caused by the discovery of copper and silver mines near Almaden. The silver mines are not far enough developed to ascertain their worth, but the copper mines have been well tried by at least one company, and found to be good, some of the ore being worth thirty to forty per cent of copper. Copper is also found in other parts of the Santa Cruz mountains, but the mines are not being worked to any extent or advantage.

MINERAL SPRINGS.

There are also known to be two good mineral springs in this county, one of which, the soda spring at New Almaden, has a high reputation at home and abroad. Another mineral spring has been discovered in the mountains west of the Town of Saratoga, (formerly McCartysville,) where a San Francisco firm are about erecting a fine hotel. This spring is said to contain the proper medicinal qualities for the cure of many of the troubles to which the human body is subject.

BOUNDARY LINES.

In regard to boundary lines, there is a few thousand acres of land in dispute between this county and San Mateo, which lies between two different branches of the San Francisquito Creek, which we are in hopes will be adjusted without any serious legal troubles.

With much respect, I remain your obedient servant,

D. M. HARWOOD,
Assessor Santa Clara County.

SAN DIEGO COUNTY.

JOHN L. McINTIER.....County Assessor.

SAN DIEGO, September 10th, 1864.

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In compliance with your request and with the law, I have the honor to submit my report for the current year. I find it almost impossible to comply strictly with the requirements of the law, but have done so to the best of my ability.

The fruit culture is on the increase, but the value of all kinds is much less than in former years. The grape culture is improving yearly.

All kinds of live stock have depreciated in value about one half, yet many of the stock raisers, having seen the necessity of improving the quality of their stock, have introduced fine blood American stallions, bulls, and rams.

Lands have depreciated in value since last year. This being a stock raising county, and so remote from market, not much attention is paid to agriculture further than for domestic use.

As a wool growing county, I think it will compare with any other in the State. It is worth while to remark, that in the future this branch of industry promises to be the most lucrative of any other in our midst.

We have one school, which will compare favorably with other country schools throughout the State.

For full particulars please refer to schedule inclosed.

Very respectfully, your obedient servant,

JOHN L. McINTIER,
Assessor San Diego County.

SHASTA COUNTY.

A. P. LADD.....County Assessor.

ASSESSOR'S OFFICE, SHASTA COUNTY, }
Shasta, October 13, 1864. }Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In compliance with your order I herewith transmit to you my annual report of statistics, etc., of Shasta County.

AGRICULTURE, ETC.

This county heretofore has made few reports, if any, as regards the agriculture and other products.

Farmers, generally speaking, have reaped first rate crops this year; and, in fact, will realize more clear cash than they have for any two years previous.

The several branches of industry in this county, viz: agriculture, mercantile, and mining—I am happy to inform you, are in a very prosperous condition. The breed of stock is improving as well as we could expect, considering the excitement we have had for the past year in “feet.” Fruit growing in this county seems of late to occupy the attention of a number of our farmers and gardeners, and, I think, they meet with good success, or they would not pay so much attention to the business. There is a first rate market for all early fruits in Trinity and Siskiyou Counties. Shasta County, situated as it is, has the advantage in raising early fruits; and, in fact, I think the flavor and quality of our fruits are equal to any on the Pacific coast. The facilities for the cultivation of the grape vine in this county, I think, cannot be excelled in this State.

MINES AND MINING.

Our mining interests are still occupying the attention of much the larger portion of our population. In fact the excitement has been so great for the past two years, consequent upon the discovery of copper and silver lodes in the different sections of this county, that most of our citizens have money invested in the development of the mines; and you will notice in my report that the capital stock of incorporated companies in this county which are now working, amounts to the sum of four million two hundred and twenty-nine thousand five hundred dollars. Several of the companies have commenced to ship ore, and others are about to erect mills. There are quite a number of moneyed men from San Francisco and elsewhere who are interested in these mines. I think in a few years Shasta County will be ahead of any county west of the Sierra Nevadas, as far as gold, silver, and copper mining is concerned. There is no question of this; but it takes money and time to make such mining profitable. Nevertheless, when capitalists take hold, everything goes along well. I believe that Professor Whitney has remarked that Shasta County was ahead of any county in this State as regards minerals; and from all appearances I have no doubt it will turn out to be true. We have five quartz mills in this county for crushing gold-bearing quartz, three of which are now running and paying the stockholders heavy dividends; two are under repair; and, I think, in another year we will have several more in running order, as there is gold-bearing quartz in abundance to keep any number of mills running for centuries.

The taxable property, real and personal, of this county, amounts to one million eighty-four thousand two hundred and ninety-three dollars and fifty-six cents. It may amount to a little more or less, as the Board of Supervisors have not acted on the subsequent assessment roll yet. I have given you the figures as near as I can ascertain up to the present time.

Respectfully, your obedient servant,

A. P. LADD,
Assessor of Shasta County.

SISKIYOU COUNTY.

D. C. STEVENS.....County Assessor.

ASSESSOR'S OFFICE, SISKIYOU COUNTY, }
Yreka, October 12th, 1864. }Hon. J. F. HOUGHTON,
Surveyor-General :

SIR:—In compliance with the law, and agreeably to your request, I beg leave to submit the following general report: You will see by the report that I have not entered into a detailed account of the different varieties of fruit trees and vegetables, since it would be almost impossible to furnish anything near a correct list. People seldom keep an account of what they produce, so that in furnishing such statistics one has many difficulties to contend with, and must frequently rely upon his own judgment. What I have furnished, I have endeavored to give as nearly correct as possible. You will also perceive by the report, that there is a falling off in property in this as well as in most other mining counties, owing principally to the Northern excitements which enticed away many of our citizens, thereby causing a general depreciation in real estate. As regards pasturage, our county has been much favored. A great portion of the beef cattle having been driven to the northern markets, the prospect for cattle growing was never better; the pasture is good, and cattle can be raised with little or no attention during the entire year. Crops this season have been rather light, which may be in part attributable to the drought, frost, and the negligence of the farmers to put in full crops. Grain has been so cheap for two years past, that many had become partially discouraged, and did not put in a full crop. There never was a time in this county that the farmer was not, if industrious, diligent, and economical, amply remunerated for his labors. Farmers have frequently stated to me that land that was summer fallowed, has produced from two to five times the crop that it does by ordinary cultivation.

Siskiyou County can boast of fine scenery, fertile valleys, streams abounding in fine trout, the mountains with all kinds of game, and the best stock range in the State. For health it is unsurpassed. We also claim to stand high in point of morality. The educational situation of the county is much better than at any previous period. We have sixteen public schools and one academy, with an aggregate attendance of four hundred scholars. Grapes, peaches, plums, apricots, apples, strawberries, raspberries, blackberries, and all kinds of garden vegetables thrive and produce abundantly, and it will not be long until we shall have an abundance of all kinds of fruits mentioned.

Our quartz mills have been doing but little during the past year, yet there are many leads that prospect well. Owing to the great scarcity of water this season, our placer mines have not yielded near the amount usually obtained. The river claims are being worked with very good success. The Chinese population of the county is large, and constantly increasing. The amount of revenue derived from them for license is over four thousand dollars per month. We have three breweries and six churches. Our county abounds in plenty of timber common to California—pine, oak, cedar, and fir. There never was a time when the people were generally more prosperous and contented than the present.

There is no doubt but that our county will increase in wealth considerably the ensuing year.

Respectfully,

D. C. STEVENS,
County Assessor Siskiyou County.

STANISLAUS COUNTY.

E. D. GIDDINGS.....County Assessor.

KNIGHT'S FERRY,
September, 1864. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—Inclosed you find the statistics compiled from the Assessor's books of Stanislaus County for the year eighteen hundred and sixty-four.

Respectfully, yours,

E. D. GIDDINGS,
Assessor Stanislaus County.

ANNUAL REPORT

OF THE

Surveyor-General of California,

FOR

THE YEAR 1865.

ANNUAL REPORT.

OFFICE OF SURVEYOR-GENERAL,
Sacramento, November 1st, 1865. }

To His Excellency
FRED'K F. LOW,
Governor of California :

SIR:—In compliance with the requirements of the law defining the duties of this office, I have the honor to submit for your consideration the following report from November first, eighteen hundred and sixty-four, to November first, eighteen hundred and sixty-five.

I am, very respectfully,

Your obedient servant,

J. F. HOUGHTON,
Surveyor-General, and Register of State Land Office.

REPORT.

STATE LANDS.

The subject of State lands and the differences between the Commissioner of the General Land Office and the State authorities, in regard to the construction to be placed upon the several Acts of donation to the State, is one which has been so frequently and thoroughly discussed in the previous reports of this office, that were it any other subject it would be exhausted; but these differences, and the various questions of the practice of the office at Washington, and of the State Land Office, in relation to them, will ever be a fruitful and inexhaustible subject of discussion until such time as they are definitely settled.

The principal questions of difference between the United States Commissioner and the State, may be briefly stated as follows :

First—The State claims the right to select other lands in lieu of sixteenth and thirty-sixth sections, which previous to the survey have been covered by grants or other private claims, or reserved for public uses, agreeably to the provisions of section seven of the Act of Congress, approved March third, eighteen hundred and fifty-three.

The Commissioner denies this right so far as applied to sections covered by Mexican grants.

Second—The State claims the right to select unsurveyed as well as surveyed lands in lieu of sections so covered, granted, or reserved, on the ground that the Act of donation was an Act treating generally of unsurveyed lands, and that no restriction was made in the Act confining such selections to surveyed lands; and in answer to the statement so often used, that the United States permits and recognizes no selections of unsurveyed lands, we refer to the fact that pre-emption rights are permitted to be acquired upon unsurveyed lands by the same law which made this donation to us, and that Sioux or half-breed scrip locations on unsurveyed lands are made, and approved by the department.

The Commissioner denies this right. It may be well to observe that the Legislature of our State, during the session of eighteen hundred and sixty-three and four, at my suggestion, in view of the denial of this

right, and in order no further to complicate the difficulties arising therefrom, suspended the sale of unsurveyed lands in lieu of such sections, without in the least abandoning the question of right.

Third—The State claims that “immediately upon the passage of the Act of Congress of September twenty-eighth, eighteen hundred and fifty, this State became the owner, with absolute power of disposition, of all the swamp lands within her limits which had not been disposed of,” as decided in *Summers v. Dickinson* (9 Cal., 554.) The Commissioner denies this, and directs the United States Surveyor-General, in reporting lists of these lands, to “exclude therefrom all tracts which may have been reserved or in any manner disposed of by the Government, or upon which there may exist *inchoate rights*, either under the *pre-emption*, *homestead*, or other laws of the United States. In a word, you should respect none but vacant and unencumbered tracts.”

Section one of the Act of donation reads as follows :

“That to enable the State of Arkansas to construct the necessary levees and drains to reclaim the swamp and overflowed lands therein, *the whole* of those swamp and overflowed lands made unfit thereby for cultivation, *which shall remain unsold at the passage of this Act, shall be* and the same are hereby granted to said State.”

Section four extends the provisions of the Act to each of the other States.

Under this law the State contends that after the passage of the Act of donation no pre-emption, or homestead, or other right could be acquired to any of these lands except under the laws of the State.

It would seem under the wording of the Act, which makes it an immediate and present grant, that all the lands which were found upon segregation to be of the class indicated became at once the property of the State, and that the power of disposition by the United States ceased from that date, the Act having fully disposed of them.

The Commissioner also contends that the proof furnished by the State of the character of the swamp and overflowed lands is insufficient—which question was fully discussed in the report of this office for the year eighteen hundred and sixty-four, and will not be repeated here.

By the Act of donation of September twenty-eighth, eighteen hundred and fifty, it is made the duty of the Secretary of the Interior, as soon as may be practicable after the passage of the Act, to make accurate lists and plats of the land, and transmit them to the Governor, and, on his request, to issue to the State patent therefor; and although more than fifteen years has elapsed since the grant was made, not an acre has been patented to the State, although lists, proofs, and maps of nearly all the swamp and overflowed lands in the State have been duly forwarded to the department.

The State authorities claim that in acquiring title to selections of school lands, the duty of the State ceases when the State Agent notifies the United States Register of the State selection, yet the Commissioner has rejected and ordered cancelled several lists of locations for which we have the Register's acceptance in due form, on the ground that the lists are made out upon blanks which refer to the wrong Act of donation.

These are clearly errors of the local Registers, and should be corrected by them.

Many other differences of less magnitude, but still of much importance, regarding the rights acquired by State selections before final approval by the Secretary of the Interior, acceptance by United States Registers of State locations, and other matters of detail, which, owing to the great delay attending adjustment by correspondence at so great a distance must wait a long time for adjustment or be settled by an agent appointed to visit Washington for the purpose.

These differences may be settled by either of the following methods:

First—By the abandonment of the position and principles which the State has assumed to be correct in its construction of the laws of donation referred to, as fully indicated and expressed in the various Acts of our Legislature providing for the sale of the different classes of lands.

Second—By a modification of the views of the General Land Office, and of the instructions of the Commissioner to the United States Surveyor-General and the Registers of the local land offices in this State.

Third—By securing the passage of a law in Congress which shall clearly define the rights of the State beyond doubt or dispute, and which shall also define the duties of the several officers of the United States in listing to the State the lands donated.

Fourth—By obtaining the decisions of our highest tribunals upon a number of cases, each involving one of the points of difference, until all are decided.

The adoption of the first of these propositions, viz: the abandonment on the part of the State of the position we have assumed, is a matter involving so seriously the honor and plighted faith of the State toward the various purchasers in good faith under her laws, that it seems to me it cannot for a moment be entertained.

To illustrate the position of the State in the event of the adoption of such a policy, I desire to call your attention to the following extract from a letter from the Honorable Commissioner of the General Land Office at Washington to the Register of the United States Land Office at San Francisco, dated July sixteenth, eighteen hundred and sixty-five, which presents a difficulty never before known to exist:

“The pre-emption case in contest between James Brown and Titus Hale has been received. Hale claims right derived from the State of California under a school selection made in substitution for a section thirty-six which was covered by a private grant.

“The State having no right to such a section thirty-six, and no right to substitute other lands therefor, Hale has no right which gives him standing as a contestant in the case.”

Section seven of the Act of Congress of March third, eighteen hundred and fifty-three, in which Act is contained the grant of every sixteenth and thirty-sixth section in the State, and which has been quoted so often in the reports of this office, reads as follows:

“SEC. 7. *And be it further enacted*, That where any settlement by the erection of a dwelling house, or the cultivation of any portion of the land, shall be made upon the sixteenth or thirty-sixth sections before the same shall be surveyed, or where such sections may be reserved for

public uses, or taken by private claims, other land shall be selected by the proper authorities of the State, in lieu thereof."

The Legislature of this State at its session in eighteen hundred and sixty-one—in the homographic chart of which may be found the names of Burbank, Campbell, Clark, Conness, Curtis, De Long, Edgerton, Heacock, Parks, Porter, Phelps, Rhodes, Shafter, Sharp, Thornton, and many others of distinction in the legal profession—passed an Act authorizing and directing the sale of all sixteenth and thirty-sixth sections proper, and in all cases where such sections were covered by *private claims or grants*, the selection and sale of other lands in lieu thereof.

Lists were obtained from the United States Surveyor-General, or the United States Registers of the different districts, of the sixteenth and thirty-sixth sections which were so covered by grants, and as purchasers made applications to purchase of the State lands in lieu of such sections, applications were made by the State Locating Agents to the respective Registers for such lands in lieu of sections so covered, and the applications were accepted.

Of this class of lands alone, the State has sold about three hundred thousand acres to some twelve hundred purchasers, who have in good faith paid the original twenty per cent required by law, and have continued in the same good faith to pay upon the deferred payment of the balance the annual interest in advance upon the promise from the State of eventual title.

The question is, shall the State dishonorably break its promises, so solemnly made and spread upon its statute books, acknowledge that she has led all these persons into error—that her eminent public servants and representatives before named did not understand their duties, and were in error in passing such a law—that the law of Congress does not mean as it reads? or shall she firmly maintain that the position she has assumed is correct, and endeavor, at least by all honorable means, to sustain that position and protect the numerous class of industrious agriculturists who have relied upon the State for titles to their homes?

By adopting the second proposition for the settlement of these differences much may be accomplished, although it can hardly be expected that by conference or argument the Commissioner can be induced to abandon all the positions assumed by him which are held to be wrong by the State.

Matters of detail, regulations for and instructions to the local Registers, and all those rulings and office practices which are not regulated by law, and which are of great importance to the State, may be so changed. For instance: It has been the practice of the Registers of the several United States Land Offices, in all cases where they believed the State selections were made in accordance with law, and no preemption, homestead, or other right to the land existed at the date of selection, to give a written consent—commonly known as the "Register's acceptance"—to such selection. This practice has continued from eighteen hundred and fifty-eight to the present time.

The Commissioner of the General Land Office, in a letter to the United States Register at San Francisco, under date of September fifteenth, eighteen hundred and sixty-five, writes as follows:

"The attention of this office has been called to a paper given by you to Leander Ransom, a Locating Agent of the State of California, a copy of which is herewith inclosed." [Inclosed was a regular Register's

acceptance of a State location.] "You are advised that the action of your office, in certifying to the agent of the State that selections had been made or accepted, was unauthorized, and is disapproved. You will discontinue the practice in future, and will inform Locating Agents of the State that the only evidence of title given by the United States to selections made under the different Acts of Congress granting land to the States, is the certificate of approval of the Secretary of the Interior to the clear lists of such locations."

Assuming this to be correct, as the State has received no certificate of approval from the Secretary of the Interior, we have no "evidence of title" from the United States to any land under any of the several grants.

Under the laws of our State, no patent can be given to the purchaser of any except swamp and overflowed land, unless the acceptance of the selection by the United States Register has first been obtained; and as, under the above instructions, Registers cannot accept, no patents can be given purchasers for any future sales, excepting swamp and overflowed lands. It is probable that the Commissioner may be induced to allow the Registers to furnish the State with some evidence that the lands selected are covered by no pre-emption, homestead, or other right, at the date of the State selection; but, as the principal questions of difference are questions of constructions of laws, this plan cannot fully answer the purpose—but for the other, it is well worth the trial. This is given as an example of many other questions, which may be settled in this way.

The plan contained in the third proposition—that of congressional legislation, so far as concerns the difference of construction of the laws—I regard as more likely to accomplish the desired result than any other proposed. As before shown, the Commissioner denies the right of the State, under the law, to select lands in lieu of sixteenth and thirty-sixth sections covered by Mexican grants. Conceding, for the purpose of adopting this plan, that the Honorable Commissioner is correct in his construction, the following numerous instances of precedents may be urged in justification of the passage of a law permitting such selections:

An Act of Congress, approved March second, eighteen hundred and seven, providing for the disposal of the public lands south of the State of Tennessee, provided that where a school section had been granted by any Act of Congress, or covered by a *British grant*, other sections should be located in lieu thereof for the use of schools.

An Act, approved April eighteenth, eighteen hundred and eighteen, authorized the selection in the Illinois Territory of other lands in lieu of school sections, where, from any cause, such sections had been disposed of.

An Act, approved May seventh, eighteen hundred and twenty-two, authorized the selection of lands in Indiana in lieu of school sections covered by the Clark grant, which covered entire townships; and the same provision was made in regard to the Vincennes donation.

An Act of May twentieth, eighteen hundred and thirty, provides that whenever a school section in the Territory of Arkansas, "either wholly or in part is now or may hereafter be included in private claims held by titles confirmed or legally declared valid, other lands equivalent thereto may be selected."

An Act of June fifteenth, eighteen hundred and forty-four, authorized the selection, in the Territories of Florida, Iowa, and Wisconsin, of other lands in lieu of school sections included in private claims.

Upon the admission of Missouri, similar provisions were made.

An Act, approved February twenty-sixth, eighteen hundred and forty-five, provided for the selections, in the States of Alabama and Mississippi, of lands in lieu of school sections covered by the lands disposed of by treaty between the United States and the Chickasaw Indians.

The State of Ohio was granted other lands in lieu of every school section covered by the Connecticut Western Reserve, although this large tract of land was owned by the State of Connecticut, and was not public land.

With all the precedents above quoted, and many others which might be given to show that no policy of our Government is more firmly established or has been more strictly and faithfully followed than that of making liberal donations for the support of common schools in every habitable township in the land, as a foundation for a system of universal education, upon which the stability and true greatness of a nation mainly depend, a bill which would give to our State the same privileges ought to meet with no opposition.

I have but little doubt that the Commissioner of the General Land Office would heartily join with our delegation in securing the passage of a bill of this nature.

If this plan is adopted, which I most strongly recommend, other matters may be adjusted in the same bill.

The bill contained in the last annual report of this office, and forwarded to our congressional delegation on the fifth of January, eighteen hundred and sixty-four, was drawn with reference to confirming to purchasers in good faith from the State the titles to all such selections, provided that at the time of such selections there existed no pre-emption, homestead, or other valid right to such land, the object being to transfer the contest from the individual to the State; and this provision should be contained in any bill which is passed.

Other provisions, regulating the listing and patenting of lands to the State upon proper evidence, should be contained in the same bill.

The fourth proposition, I believe, should be used only as a last resort.

If, with the reasons we can bring to bear why it should be done, no modification of the views and instructions of the Commissioner can be had by conference, and with all the precedents before us we cannot secure the passage of an Act which shall permit selections of school lands in lieu of such sections covered by grants, and other relief, I am still convinced that, with the plain, and, as I think, unmistakable meaning of our present laws, the right to make such selections will be accorded us by the Courts.

In view of all the facts set forth in the foregoing discussion, the plan which I would recommend for the disposal of all these differences would be that the Legislature, at its next session, should select an agent who is perfectly familiar with all the laws of donation, with all the questions of difference between the United States and the State authorities, with the instructions of the department to the local Registers, and with the details of our State laws, and their application in detail to the sales of State lands, and send him to Washington with no other duty than to confer with the United States Commissioner in regard to all these questions of difference, setting forth the dishonorable position in which the State will be placed if she fails to perfect the titles promised purchasers under her laws, the embarrassing position in which the purchasers themselves will be placed, and the vexatious and ruinous litigation which such an event will involve. He should make the Con-

necticut Resolutions, adopted by the Legislature on the twenty-fourth of April, eighteen hundred and sixty-three, the basis and groundwork of his efforts, and urge the justness of the proposition therein contained.

These resolutions simply confirm to the State, and the purchasers under her laws, all lands which have been selected as part of either of the donations to the State, and which have been sold in good faith to purchasers; and provides that if it shall be found, upon final investigation, that the State has selected any lands to which she was not entitled, she shall pay to the United States one dollar and twenty-five cents for each and every acre so determined to have been improperly selected. Of course it would not be asked to confirm any selections upon which any right under the laws of the United States had attached at the date of selection. With such reasonable requests as the above, it is believed that the co-operation of the Land Office can be obtained, not only to the passage of a bill which will confirm such sales, and permit selections in lieu of school sections covered by grants, but also to such modification of instructions to Registers as the law will permit, and will be least oppressive to claimants under State law, while it does full justice to all claiming under the United States.

GRANT OF SIXTEENTH AND THIRTY-SIXTH SECTIONS.

Since the foregoing on the subject of State lands was written, the following letter from J. S. Murray, Esq., State Locating Agent for the Humboldt Land District, has been received, which shows another source of difference between the honorable Commissioner and the State:

STATE LOCATING AGENT'S OFFICE,
Ureka, Humboldt County, California, Oct. 23d, 1865. }

Honorable J. F. HOUGHTON:

SIR:—Yours of October thirteenth has been received, requesting me to ascertain from the United States Register the nature of the defect of form in location Number Forty-Nine, sixteenth and thirty-sixth sections, made for S. L. Shaw, and cancelled by the Commissioner of the General Land Office. Upon application to the Register, and an examination of his books, I can only find on record the words "cancelled for want of form" marked opposite the application in the tract book. The records of my office are fuller, and from that source I have to inform you that Mr. Shaw's application was made for lands, in lieu of others, in Township seventeen north, Range one west—the two tracts being eighty or ninety miles apart, but both in the same meridian and land district. At this time the Commissioner had not issued his letter of instructions nullifying or restricting the grant made by Congress for educational purposes, and therefore there was no known obstacle at the date of the selection.

After the issuance of the Commissioner's instructions, when it was found that he restricted the State to lands in the same township, if there were any vacant, if not, to the nearest vacant lands, I was notified that these selections, together with numerous others in Mendocino County,

were cancelled; and I was requested to select other lands in the various townships where the sixteenth or thirty-sixth sections lay, in lieu of which the lands had been sought.

To this I replied, that the original selections were made strictly in accordance with the grant and the laws of the State, and that, even if otherwise, I had no power under the law to select, except upon application of a purchaser, accompanied by certain affidavits, and that there was no officer of this State authorized to make such selections. Upon this, the officer immediately, and acting under the instructions of the Commissioner, selected or set apart certain lands in lieu of the cancelled selections, knowing, as he confessed, absolutely nothing of the lands so set apart, nine tenths of which are not worth ten cents per acre, to my knowledge.

In conclusion, every selection in this county, and the lands in lieu of which they were made, I was personally acquainted with, and I kept the two as near together as possible. Shaw's was the last before the land sale, and the school sections in Township seventeen north, Range one west, were the only ones then unappropriated.

I have only to add that I protested against these selections by the Register, and notified the State Land Office of the fact. Mr. Keleher was not then Register, and knows nothing of the matter except from his records.

I am, sir, your obedient servant,

J. S. MURRAY,
Locating Agent.

It will be seen from the above as well as from the circular issued from the General Land Office August twenty-first, eighteen hundred and sixty-two, that the Commissioner claims that the State is restricted in making selections in lieu of sixteenth and thirty-sixth sections which have been pre-empted, to the same township, or if there are no vacant lands within the township, then to the nearest vacant lands; and also, that the selections may be made by the Secretary of the Interior.

This claim of the Commissioner is made under the Act of Congress of February twenty-sixth, eighteen hundred and fifty-nine, which refers to the Act of May twentieth, eighteen hundred and twenty-six.

A careful reading of the two Acts referred to, and the Act under which we claim these lands and the power of selection, (that of March third, eighteen hundred and fifty-three,) will satisfy you that both these claims cannot be correct. The State has been selecting lands within the same *district*, as that course is permitted by the Act of eighteen hundred and twenty-six, and is not refused in the Act of eighteen hundred and fifty-three, and the latter Act gives the State authorities alone the right to select lands in lieu, and no subsequent Act impairs that right.

It is certain that all selections made by the State in lieu of sixteenth and thirty-sixth sections covered by grants, or in lieu of such sections covered by pre-emptions before survey, which have not been made upon the nearest vacant land, will be, if they have not already been, rejected by the General Land Office. And as the State has not authorized its agents to select land until an applicant to purchase has indicated it and come forward with the necessary affidavits, the several local Registers will be, as in the case at Humboldt, instructed to select lands in lieu, which may be, as Mr. Murray says, not worth ten cents an acre.

Again: I do not think the State desires, without a hearing in the Courts, to abandon its purchasers.

This subject presents another strong reason for sending an agent to Washington, as before suggested.

AGRICULTURAL COLLEGE LANDS.

I desire to call your attention to the Act of Congress of July second, eighteen hundred and sixty-two, entitled an Act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts, under which Act the State will be entitled to one hundred and fifty thousand acres of public land, conditioned upon compliance with the provisions of the Act.

Section four of the Act provides: "That all moneys derived from the sale of the land aforesaid by the States to which the lands are apportioned, and for the sale of land scrip hereinbefore provided for, shall be invested in stocks of the United States, or of the State, or some other safe stocks yielding not less than five percentum of the par value of said stocks, and that the moneys so invested shall constitute a perpetual fund, the capital of which shall remain forever undiminished, (except that ten per cent may be used in purchase of lands for sites, or experimental farms,) and the interest of which shall be inviolably appropriated by each State which may take and claim the benefit of this Act, to the endowment, support, and maintainance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the Legislature of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."

The third division of section five of the Act provides that "any State which may take and claim the benefit of the provisions of this Act shall provide within five years, at least not less than one college, as described in the fourth section of this Act, or the grant to such State shall cease, and said State shall be bound to pay to the United States the amount received from any lands previously sold."

It will be seen from the above extracts from the law of donation that the State has less than two years in which to provide at least one of these colleges, therefore unless at the next session of the Legislature provision is made for such a college, the grant will be lost. The State is restricted in its selections to such lands as are subject to sale at private entry, at one dollar and twenty-five cents per acre, or, in other words, to such lands as have been offered at public outcry by President's proclamation, at one dollar and twenty-five cents per acre, and no purchaser found.

As all lands of this description may be purchased from the United States at that rate, and paid for in United States legal tender notes, while under the State law they are only offered at the same price in coin, it will be readily seen that no sales by the State will be likely to be made.

It is possible that upon representation to Congress, that in conse-

quence of the large quantity of mineral land within our State, and the fact that the greater portion of our best agricultural lands are covered by Mexican grants, but little of the public land has been surveyed, and but very little is subject to private entry, the law might be changed so as to permit this State, under the peculiar circumstances named, to select these lands from any public land after survey.

If such selections were permitted, the whole grant could be converted into money in one or two years, and a respectable fund derived for support of a college of the class designated in the grant.

TIDE LANDS.

The subject of the sale of marsh and tide lands within five miles of the Cities of San Francisco and Oakland, and one mile and a half of the State Prison, seems to have assumed an importance which I had not given it one year ago, when your attention was called to it in my annual report, nor does its importance seem to have been appreciated by the Honorable Board of Swamp Land Commissioners in May, eighteen hundred and sixty-four, when, in an official report to this office, they certified that the lands of this character sold by an Act of the Legislature (under an appraisal, to be made by them) to the Golden City and North San Francisco Homestead Associations, were worth three dollars per acre; nor could it have been appreciated by them in June of the previous year, when, in an official report to this office, they certified that the lands sold by an Act of the Legislature (under an appraisal, to be made by them) to the South San Francisco Homestead Association, were worth one dollar per acre.

The importance which has since been given to this subject induces me to give more fully than in my last report the circumstances under which certificates of purchase for some of this class of lands, in the vicinity of San Francisco and Oakland, were issued. The first demand since I have been in this office for a certificate of purchase of any marsh and tide lands within five miles of the Cities of San Francisco and Oakland, or one mile and a half of the State Prison, was made by the attorney of Mr. A. Lusk, for one hundred and twenty acres of land surveyed by the County Surveyor of Alameda county.

Although, after careful consideration of the laws, I agreed with him that either by design or careless legislation the lands were not exempted from sale, I refused to issue the certificate unless sustained by some other authority, that it was my duty to do so, and the question was referred to the Attorney-General by letter, referring him to all the laws on the subject, and stating fully the case, as follows:

STATE OF CALIFORNIA, STATE LAND OFFICE, }
Sacramento, February 23, 1864. }

To Hon. J. G. McCULLOUGH,
Attorney-General:

Albert Lusk has made application for a certificate of purchase for one hundred and twenty acres of salt marsh and tide land in Alameda County. It has been regularly surveyed, the survey approved, and

the twenty per cent and the first year's interest paid to the County Treasurer. There is no counter claimant, and no person making opposition. The law for the purchase of this land has been strictly complied with. I have heretofore refused to issue certificates of purchase of marsh and tide lands within five miles of the Town of Oakland, upon the supposition that they, as well as swamp and overflowed lands, were excluded from sale. This piece of land is at the outer limit, but within the five miles of Oakland. Lusk contends that section thirteen of the Act for the sale of swamp and overflowed lands, passed April eighteenth, eighteen hundred and fifty-eight, (on which I have relied as excluding these lands from sale,) expressly provides in terms that they may be sold. He also contends that the legislation providing for their sale continued in force and was reconfirmed in express terms by sections twenty-six and twenty-seven of the Act for the segregation and reclamation of swamp, marsh, and tide lands, and approved May thirteenth, eighteen hundred and sixty one. He further contends that the Act of May fourteenth, eighteen hundred and sixty-one, providing for the sale of salt marsh and tide lands, did not repeal former Acts, but ratified and confirmed sales made under them, and continued their provisions in full force, its prohibitions being intended to apply only to any attempt at purchase under its own provisions, leaving unrepealed the Acts of eighteenth of April, eighteen hundred and fifty-nine, and May thirteenth, eighteen hundred and sixty-one, providing for the sale of these lands. The only other Act having any bearing upon the subject is the Act of April twenty-seventh, eighteen hundred and sixty-three, and by reading section thirty it will be seen that these lands are entirely excluded from its provisions. A critical reading of the law has convinced me, that while my rulings have been correct in relation to swamp and overflowed lands within the boundaries mentioned, I should be doing injustice to applicants in making this ruling apply to marsh and tide lands. I certainly ought not to continue to refuse to issue this certificate, if not clearly sustained by the law; for I have no wish to invite litigation and personal expense, to have the Courts decide that my rulings are what the law should be, and not what it really is.

Shall I issue the certificate of purchase, or refuse and contest the case in the Courts?

Very respectfully, etc.,

J. F. HOUGHTON, Register,

By A. S. BENDER, Deputy.

Early in the month of March, no answer having been received to the above, at the request of Mr. Lusk's attorney I went with him to the office of the Attorney-General, who told me that he had examined the subject, and that the laws did not seem to exclude from sale the marsh and tide lands within five miles of San Francisco and Oakland and one mile and a half of the State Prison; but that he did not like at that time to give a full written opinion to that effect, as he was then engaged on behalf of the State in a suit to set aside a patent issued by Governor Downey for tide lands covering part of the prison brick yards, and such an opinion would be equivalent to an abandonment on the part of the State of her position in that case.

Upon examination of the records of my office, I found that while

Mr. Higley was Surveyor-General, Governor Downey had issued patents to the following persons for tide lands near the State Prison :

Date.	To Whom.	Acres.
April 18th, 1860.....	J. F. McCauley, for.....	40.35
August 8th, 1860	George N. Cardwell, for	50.33
October 23d, 1860.....	Martha Buckelew, for.. ..	11.84

All of which tracts were in close proximity to the State Prison, and the first named conveyed part of the brick yards.

The fact was also brought to my notice that in a suit brought at the instance of the Board of State Prison Directors, to set aside the first named patent, the Honorable Judge Southard, of the Seventh Judicial District Court, rendered a decision against the State, and sustaining the validity of the patent. (This case was subsequently abandoned on the part of the State, and the land purchased from the claimant under the tide land patent, for the use of the prison.)

On the twenty-third day of May I received from the Attorney-General the following reply to my letter of February twenty-third :

STATE OF CALIFORNIA, ATTORNEY-GENERAL'S OFFICE, }
Sacramento, May 23d, 1864. }

Hon. J. F. HOUGHTON,
Surveyor-General, Register, etc. :

DEAR SIR :—In reply to your question contained in a communication to me of February twenty-third, eighteen hundred and sixty-four, (which would long since have been answered, as I have explained to you verbally, had not the State's interests been involved in a similar case,) whether you were authorized to issue to one Albert Lusk a certificate of purchase to certain lands situate within five miles of the Town of Oakland, and belonging to the quality of salt marsh and tide; reserving still a full answer to the general question involved in your letter, for the same reason that I have so long delayed this reply, and *only* for that reason, I advise you in this particular case to issue the said certificate to Mr. Lusk, upon his full compliance with the other provisions of the law.

I remain truly,

J. G. McCULLOUGH,
Attorney-General.

Upon the receipt of this letter, Mr. Lusk's certificate was delivered, and on the second day of June, evidence of full payment having been received with an application for a patent, it was made out and sent with the proper certificate, inclosed with the following letter fully explaining the case :

STATE OF CALIFORNIA, STATE LAND OFFICE, }
 Sacramento, June 2d, 1864. }

His Excellency FRED'K F. LOW,
 Governor of California:

DEAR SIR:—In February last Mr. Albert Lusk made application to this office for a certificate of purchase for salt marsh and tide lands situate between four and five miles from the City of Oakland. Up to that time it had been the practice of this office to regard such lands as exempt from sale under section thirteen of the Act of April twenty-first, eighteen hundred and fifty-eight, but upon a careful consideration of that Act, and the Acts of May thirteenth, eighteen hundred and sixty-one, (sections twenty-six and twenty-seven,) May fourteenth, eighteen hundred and sixty-one, and April twenty-seventh, eighteen hundred and sixty-three, I became satisfied that such practice was contrary to law, but refused to change the practice unless upon the opinion of the Attorney-General.

On the twenty-third of February, I stated the case to the Attorney-General, asking him what my duty was in the premises. A copy of this letter, with his reply, dated May twenty-fifth, is herewith inclosed, and in accordance with it I have issued the certificate.

Mr. Lusk has made payment in full and applied for his patent, certificate for which I send herewith. As this is the first instance in which a certificate has issued to any lands heretofore regarded by me as exempt under the Act first referred to, I desire to call your attention to it, that you may satisfy yourself before signing the patent.

I am, very truly,

Your obedient servant,

J. F. HOUGHTON,
 Register of the State Land Office.

On the seventh day of June the patent was returned to my office, signed by the Governor. Up to this time no certificates of purchase of any of the lands in question had been delivered from this office, except the one referred to as delivered to Mr. Lusk; but actuated only by a desire to know and perform my duty according to law, as bound by my oath of office to do, and regarding the accumulated evidence herein presented as sufficiently conclusive upon this point, from that time until the tenth day of December of that year certificates of purchase were issued to applicants who had in all respects complied with the law.

On that day I received a letter from the Attorney-General advising me to stay all proceedings in regard to the sale of the lands in question just where they were, which advice I have strictly followed.

On the twelfth day of December, two days later, the Attorney-General wrote me, referring me to the decision of the Supreme Court in the case of *The People, ex rel. Pixley, Attorney General v. Morrell*, which he regarded as settling the question against the sale.

Between the seventh day of June and tenth day of December, certificates of purchase were issued to twenty-seven applicants, for one thousand three hundred and thirteen and sixty-five one-hundredths acres within five miles of San Francisco, and to forty-four applicants for four thousand six hundred and eight and twenty-six one-hundredths acres within five

miles of Oakland, upon surveys and applications forwarded to this office by the County Surveyors of the respective counties.

Thirteen surveys and applications have been returned by the County Surveyor of San Francisco, embracing five hundred and ninety-five and forty-two one-hundredths acres more of these lands, which, under the last letter of the Attorney General, have been refused any action whatever in this office.

Three patents were, upon application, prepared for lands in Alameda County, and forwarded to the Governor, which have not been returned or issued.

No patents for any of these lands within five miles of San Francisco have been applied for, and consequently none have been prepared, and will be refused if applied for.

In concluding this subject, I desire to renew the recommendation contained in my last report in regard to the repeal of the laws relating to the sale of the lands in question.

MEXICAN GRANTS.

It is a subject of much regret that the State did not, in the settlement of the boundaries of the several grants bordering upon the bays and seashore, intervene in the different Courts of the United States, as a party in interest, to definitely determine and adjust the principle upon which the lines of such grants should be run with reference to the marsh and tide lands which are the property of the State by virtue of sovereignty.

It is represented that instances are not rare where grants have been confirmed, and surveys approved, and in some instances patents issued by the United States covering lands which are undoubtedly the property of the State, and which the action above suggested would have secured to her. These grants being made under the laws of the Mexican Republic, the grantees could only acquire title to such lands as were permitted to be or could be granted by Mexican law.

In the case of *Pollards v. Hagen* (3 Howard, 212,) it is held that "the shores of the sea passed to the State on her admission into the Union as incident to her sovereignty;" and in the Roman or civil law, from which the Mexican law is derived, the doctrine is well established that by the shores of the sea is meant the extreme tidal wave. In law (4 Tit. 28 of Partida, 3,) it is said: "By the seashore is understood all that space of ground covered by the waters of the sea in their highest annual swells, whether in summer or winter."

This position is sustained by various decisions of the Roman tribunals, one of which was rendered by Cicero in a cause in which he was arbiter. The civil law of the State of Louisiana has adopted the definition of the Roman law to fix the shore of the sea, and Article IV declares that, "By seashore we understand the space of land upon which the waters of the sea are spread in the highest water during the winter season."

The principles which should govern in defining boundaries of the kind referred to do not seem, in the many cases before the United States Courts, to have frequently engaged their attention, or to have been very strongly presented, from the fact that the State, who was chiefly the

party in interest to sustain the doctrine of the civil law, has entirely neglected to appear in these cases.

In the case of the United States v. Thomas Pacheco, before the United States Supreme Court, at the December term for eighteen hundred and sixty-four, on appeal from the decree of the United States District Court for the Northern District of California, which decree was in substance as follows:

“Where the sea or a bay is given as the boundary of a grant made by the Mexican authorities in California, the line of ordinary high water mark is intended.”

Mr. Justice Field, in rendering the opinion of the United States Supreme Court, uses the following language:

“By the common law, the shore of the sea, and of course of arms of the sea, is the land between ordinary high and low water mark—the land over which the daily tides ebb and flow. When, therefore, the sea or a bay is named as a boundary, the line of ordinary high water mark is always intended, where the common law prevails.” (3 Kent, 427.)

“And there is nothing in the language of the decree which requires the adoption of any other rule in the present case.

“If reference be had to the rule of the civil law because the bay is given as a boundary in the grant from the Mexican Government, the result will be equally against the position of the appellants.”

It will be noticed that Mr. Justice Field says that *when* the common law prevails, the ordinary high water mark is intended.

He also says that if reference be had to civil law, (which, as before shown, places the shore at the extreme tidal wave,) “the result will be equally against the position of the appellants,” without directly and positively declaring which law should govern in these cases.

In view of all these facts, I think it would be well to consider whether the interests of the State would not be subserved by intervening in all cases of grants which have not already been definitely settled and patents issued. Where they have been so settled, the evils arising from the disturbance of titles once regarded as perfect would doubtless be greater than any benefits which could possibly accrue to the State by securing the lands in question.

In all cases where the State has sold lands of this description to purchasers in good faith prior to the location of the grant, I believe it to be the duty of the State to maintain its honor by defending the purchaser in his title to the extent of the law.

Another case has come to the notice of this office in which I believe it to be the duty of the State to bring a suit to determine and quiet the title.

Soon after the passage of the first laws providing for the sale of the swamp and overflowed lands of the State, surveys were made by the County Surveyor of Sacramento County for applicants to purchase lands of that class lying a few miles below the City of Sacramento, and entirely outside of the boundaries of the grant known as the Sutter Grant, as then surveyed. Approvals were made, certificates of purchase, and in some instances, patents were issued by the authorities of the State for such lands.

The character of these lands is fully established by the segregation, affidavits, and surveys made under the direction of the Honorable Board of Swamp Land Commissioners.

A recent survey of the grant has included the lands embraced in many sales made by the State, and the purchasers contend that even the patent from the United States could not give title to the grantee for any lands of this description, for the reason that it is expressly stipulated in the grant to Sutter, "that lands overflowed by the swelling and current of the rivers shall not be included in said grant."

I have been shown what purports to be a printed copy of the grant, in which the above exception is made; and the purchasers from the State represent that they do not desire to be put to the expense and trouble of defending individual suits in ejectment, nor to abandon the land which in good faith they purchased of the State with promise of title; and they further claim, with much reason, I think, that the State should assume their position and defend them in title. I submit this for such action as will do them justice.

A narrow strip of land lying on the east bank of the Sacramento River, between the mouth of the American River and the Old Ford near the Town of Nicolaus, in Sutter County, was included in the original survey of this grant, and known upon such survey as Lot Number Five. After confirmation by the Land Commissioners, and survey embracing this land, Sutter and his agents sold, in small parcels, all, or nearly all, of this land to purchasing farmers. Subsequently it was rejected from the survey, and as it included some swamp and overflowed lands, applications were made in some instances by other persons to purchase from the State, but protest having been filed by the purchasers of the grant title, no certificates of purchase have issued to such other persons.

I suggest that, inasmuch as the purchasers have, in most instances, made valuable improvements upon such swamp and overflowed lands, that legislative action permitting them to enter such lands in preference to persons who have made no improvements, would be but an act of justice.

STATE LAND LAWS.

In consequence of the position which the Commissioner of the General Land Office had assumed with reference to State selections upon unsurveyed lands, I prepared a bill, which at the last session of the Legislature became a law, suspending the sale or selection of any unsurveyed lands in lieu of sixteenth or thirty-sixth sections.

This law has been productive of much good, and I desire again to recommend the passage of an Act which shall suspend or prohibit the location of school land warrants, and the sale or location of sixteenth and thirty-sixth sections proper, except upon lands which have been duly surveyed by authority of the United States.

After the passage of such a law, no sales of any class of unsurveyed lands donated by Congress would be authorized by law, except swamp and overflowed.

Considering all the difficulties which have grown out of the legislation which authorized such sales, it is a subject of much regret that any such laws were ever passed, and it is a serious question if the State will not

be liable in damages to the purchasers, in the event she fails to perfect their titles.

The State has in many instances sold and given certificates of purchase of lands which have been rejected by the General Land Office, and if any legislative protection can be given to the purchasers until the matter may be adjusted with the United States, I suggest that it be done. A few cases occur wherein land which has been segregated and returned to this office as swamp and overflowed, by the several County Surveyors acting under authority of the Board of Swamp Land Commissioners, as sold to purchasers as such, has, upon subsequent survey by the United States Deputy Surveyor, been returned as sixteenth or thirty-sixth section high land.

In either event the land is the property of the State, and I have informed the parties that I regarded their title sufficient, but as the parties have some doubt of the title thus obtained, I have, upon consultation with the Attorney-General, decided to recommend the passage of a law confirming all such titles. The law of April fifteenth, eighteen hundred and sixty-two, requires that any person making application for a duplicate certificate of purchase, the original of which has been lost or destroyed, shall publish in a newspaper in the county in which the land is situate, or in the paper published nearest the land described in the certificate, for four consecutive weeks, a notice of his intention to apply for a duplicate.

This law is regarded as oppressive by many, since the law for issuing the original requires no advertisement; and it is believed that an affidavit that the applicant was the owner of the certificate—describing it—and that he had not assigned or transferred the same, or the land described therein, would be all that is necessary, and less burdensome upon purchasers.

By an Act of the Legislature, approved April twenty-sixth, eighteen hundred and fifty-eight, the Supervisors of the several counties were authorized to sell the sixteenth and thirty-sixth sections of each congressional township within their respective counties.

In many instances, the Supervisors of several counties, proceeding under the law, sold at prices far in advance of the rates at which these lands were subsequently offered, and took bonds for deferred payments. Many instances have come to my knowledge where parties purchasing at these sales have asked to be released from their bonds, and to be permitted to purchase at the same rate as other purchasers of sixteenth and thirty-sixth sections, because the State, on the twenty-second of April, eighteen hundred and sixty-one, changed the price of these sections to one dollar and twenty-five cents per acre—the same as it was before the passage of this Act.

In a few instances, the Supervisors of San Joaquin County, regarding the eighteenth section of the Land Act of April twenty-seventh, eighteen hundred and sixty-three, as sufficient authority for the proceeding, directed the bonds of the purchasers to be cancelled, and the same parties applied to purchase under the Act of eighteen hundred and sixty-one, at one dollar and twenty-five cents per acre.

Not being satisfied that the authority was conferred by the section referred to, I refused to issue certificates of purchase under the last Act, until authorized by the Legislature to do so.

If it is desirable to permit purchasers at Supervisors' sales to abandon and purchase under subsequent Acts, the Legislature should pass an Act to that effect.

IRRIGATION.

This subject, which has been so often discussed in the annual reports of this office, has begun to engage the serious attention of the people of the State, as will be seen by reference to the report of the County Surveyor of Colusa County, to which I desire to call your attention.

About one year since, the residents of that portion of Colusa County lying near the Sacramento River, desiring to satisfy themselves of the practicability of constructing a large canal for the purpose of irrigating the arid plains of that county, secured the services of a thoroughly competent engineer, who, with the assistance of the County Surveyor of the county, ran a preliminary line of levels for a canal one hundred feet wide at the bottom, four feet deep, with side slopes of two to one, and from the line thus run, and an examination of the ground, an approximate estimate of excavation, and detailed estimates of head-gates, culverts, and waste-weir, were made for a first class work, the summary of which will be found in the report referred to.

The practicability of the work was fully demonstrated by the survey, and it only remains to present the plan to the public in a form which will secure profitable returns to secure its construction.

Along the line of the proposed canal, and its distributing branches, are hundreds of thousands of acres of public lands, rich in soil, but comparatively worthless for want of means of irrigation, without which it can hardly be expected that the General Government can ever dispose of them. Government surveys of many of the lands proposed to be watered have been made, and they are open to pre-emption, yet for want of irrigation crops cannot be matured, and but very few settlers have located there, and those only upon the choice spots. If the character of these lands was properly represented to Congress, the projectors of the enterprise believe that a grant might be made of them to aid in its construction, and I therefore present the subject as one of great interest to the State for such action as may be deemed proper.

Another company has been incorporated under the general law of the State for the purpose of diverting the waters of Putah Creek into a canal for purposes of irrigation. The exceedingly favorable topography of the country in the vicinity permits the construction at very light cost of a canal which will irrigate a very large body of land.

This work is exceedingly small in comparison with the proposed Colusa canal; but its small cost, the great advantages to be derived, and the large returns it promises to the owners, it is believed will secure its completion within the coming year, and fairly test the advantages to be derived from this method of farming.

SCHOOL LAND FUND.

I think it will be well to call the attention of the Legislature to the fact that the money arising from the sales of school lands, which forms part of the funds distributed for the support of common schools, is likely to be hereafter very materially diminished for the following reasons:

First—The rulings of the General Land Office before referred to, severally restricting the State in her school locations, will tend to retard sales.

Second—Selections have already been made in lieu of most school sections covered by the grants.

Third—Under the nineteenth section of the Land Act of April twenty-seventh, eighteen hundred and sixty-three, parties who have purchased lands which have proved not to have been the property of the State, are entitled to certificates of transfer for payments so made, which certificates can be used in payment for lands of the same class anywhere in the State.

The Supreme Court, at the January term for eighteen hundred and sixty-five, decided in the case of *Grogan v. Knight*, that selections of unsurveyed lands in lieu of sixteenth and thirty-sixth sections were invalid; and since the passage of the Act above referred to, certificates of transfer amounting to thirteen thousand and eighty dollars have been issued to persons who have abandoned their locations and called for them, which certificates, I presume, have mostly been paid in on other locations, instead of coin.

This will probably continue, and some other means may be necessary to replenish the School Fund.

YOSEMITE VALLEY, AND MAMMOTH TREE GROVE.

By an Act of Congress, approved June thirtieth, eighteen hundred and sixty-four, the Valley of the Yosemite and the Mammoth Tree Grove in Mariposa County were donated to the State, upon the express stipulation that neither should be sold; that they should be held for public use, resort, and recreation; that they might be leased in parcels for terms not exceeding ten years—all incomes derived to be expended in preservation, improvement, or on roads leading thereto. A visit during the past year to the first named place, has convinced me that a judicious system of leasing the valley land, or a law permitting parties to construct a road and charge a moderate toll, an easy mode of access may be made to these great wonders of nature.

With the exception of three or four miles, a road over the entire distance from Black's to the Valley House—thirty-four miles—could be built with very light cost.

STATE LANDS.

The amount of land which has become the property of the State under the various grants is as follows:

Description.	Acres.
Grant of sixteenth and thirty-sixth sections, about	6,755,000
Grant of swamp and overflowed lands, about.....	1,500,000
Grant for internal improvements*.....	500,000
Grant for a seminary of learning.....	46,080
Grant for public buildings.....	6,400
	8,807,480
Grant for an Agricultural College	150,000
Total	8,957,480

To this amount must be added the salt marsh and tide lands belonging to the State by virtue of her sovereignty, but their quantity cannot, for obvious reasons, be exactly known.

Up to the date of the present report, these lands have been disposed of as follows:

SCHOOL LANDS.

GRANT OF FIVE HUNDRED THOUSAND ACRES.

How sold.	Acres.
Under school land warrants prior to the passage of the Act of April 28th, 1858	237,760.00
For cash since that time.....	261,197.83
Total	498,957.83

Leaving a balance of one thousand and forty-two and seventeen one-hundredths acres, which is reserved as a margin to correct errors in the final adjustment of the grant.

GRANT OF SIXTEENTH AND THIRTY-SIXTH SECTIONS.

Amount located of Sixteenth and Thirty-Sixth Sections proper.

Districts.	Acres.
Stockton, surveyed.....	22,979.01
Stockton, unsurveyed	5,280.00
	28,259.01

* Diverted to school purposes.

Marysville, surveyed	24,531.81	
Marysville, unsurveyed.....	4,237.00	
		28,768.81
Humboldt, surveyed	6,524.50	
Humboldt, unsurveyed.....	1,280.00	
		7,804.50
San Francisco, surveyed.....	7,320.00	
San Francisco, unsurveyed ..	10,100.00	
		17,420.00
Visalia, surveyed		7,540.80
Los Angeles, unsurveyed		400.00
		90,193.12
Locations unapproved in above districts		1,992.21
Total located.....		92,185.33

The amounts of sales of these lands by the Boards of Supervisors of the different counties, under the Act of April twenty-sixth, eighteen hundred and fifty-eight, is, so far as reported to this office, eighteen thousand seven hundred and twenty acres.

LANDS TAKEN IN LIEU OF SIXTEENTH AND THIRTY-SIXTH SECTIONS,
RESERVED OR DISPOSED OF BY THE UNITED STATES, OR COVERED BY
PRIVATE GRANTS.

Districts.		Acres.
Stockton, surveyed.....	19,580.00	
Stockton, unsurveyed.....	32,731.19	
		52,311.19
Marysville, surveyed.....	33,980.12	
Marysville, unsurveyed.....	6,808.50	
		40,788.62
Humboldt, surveyed.....	10,693.64	
Humboldt, unsurveyed.....	7,560.00	
		18,253.64
San Francisco, surveyed.....	41,520.00	
San Francisco, unsurveyed.....	183,360.00	
		224,880.00
Visalia, surveyed.....		80.00
Los Angeles, surveyed.....	360.00	
Los Angeles, unsurveyed	9,088.40	
		9,448.40
		345,761.85
Locations unapproved.....		1,186.80
Total located.....		346,948.65

The above tables show the number of acres which have been located by individuals, and for which application has been made on behalf of the State to the Registers of the United States Land Offices of the several districts, except that the totals must be reduced by the amount of *relocations*. They must, however, be further reduced—in order to give the amount under location at this date—by the number of acres for which application has been made to the United States, and which has been sold by the State, but which have since proved to be within the boundaries of grants, or have been disposed of in such manner that the State's selections were necessarily abandoned.

Locations.	Acres.
Located on sixteenth and thirty-sixth sections.....	92,185.33
Located in lieu of sixteenth and thirty-sixth sections.....	346,948.65
Total applied for.....	439,133.98
Deduct relocations..... 3,841.00	
Deduct abandoned..... 29,160.00	
	33,001.00
Total under location... ..	406,132.98

Of the amount stated as under location, quite a large amount has produced nothing to the State, for the reason that many of the locators have failed to make the first payments, and have forfeited the right to purchase.

SEMINARY LANDS.

GRANT OF SEVENTY-TWO SECTIONS.

Locations.	Acres.
Amount of grant.....	46,080.00
Located in Marysville District..... 29,119.80	
Located in Visalia District... .. 1,280.00	
Located in Humboldt District..... 10,041.36	
Located in San Francisco District..... 3,204.66	
Located in Stockton District..... 320.00	
Amount not located	43,965.82
Amount located and abandoned, being within the lines of a grant	2,114.18
Amount subject to location..... 2,080.00	
	4,194.18

The amount relocated is three hundred and twenty acres.

PUBLIC BUILDING LANDS.

GRANT OF TEN SECTIONS.

Location.	Acres.
Amount of grant.....	6,400.00
Located in Marysville District.....	967.00
Located in Stockton District.....	1,600.78
Located in Humboldt District.....	1,283.00
Located in Visalia District.....	1,294.24
Located in San Francisco District.....	320.00
	5,458.02
Amount unlocated.....	941.98

The amount relocated is one hundred and sixty acres.

STATE SCHOOL LAND WARRANTS,

Located under the Act of April 23d, 1858.

Location.	Acres.
Located at date of last report	22,572.00
Located since date of last report.....	4,888.36
Total to date of this report.....	27,460.36

The above amount refers to the locations approved by the Surveyor-General and recorded in the State Land Office. There are, in addition, in the office of the Surveyor-General, unapproved locations to the amount of eight thousand four hundred and eighty acres. Of these, as stated in the last annual report, five thousand one hundred and twenty acres are embraced in locations within the limits of the City and County of San Francisco, and can be approved only upon the Court to which the case has been referred so deciding.

STATE SCHOOL LAND WARRANTS,

Located upon Unsurveyed Lands, under the Act of April 18th, 1859.

Location.	Acres.
Located at date of last report.....	65,200.00
Located since date of last report.....	480.00
Total.....	65,680.00
Deduct abandoned.....	10,960.00
Total located at date of this report.....	54,720.00

It is known that a large number of warrants were located through the United States Land Office, or by County Surveyors, under the Act of eighteen hundred and fifty-two, but the amount is not now known, as many of the original locations have been abandoned and the warrants floated. Under the provisions of the twenty-sixth section of the Act of April twenty-seventh, eighteen hundred and sixty-three, the Register has issued his certificate for the duplicates of such warrants as were shown to have been lost or destroyed, or in any manner rendered unavailable to the owners. In the few instances in which the original warrants were not cancelled and in the possession of the Register, the bonds required by the Act have been furnished.

SWAMP AND OVERFLOWED LANDS.

Sales.	Acres.
Sold at date of last report.....	753,705.63
Sold since date of last report.....	39,818.66
Total.....	793,524.29
Deduct re-surveys.....	22,396.47
Deduct abandoned.....	15,138.26
	37,534.73
	755,989.56
Sold during the year.....	39,818.66
Applied for during the year.....	16,599.19
	56,417.85
Deduct re-surveys.....	10,411.37
Original surveys.....	46,006.48

SALT MARSH AND TIDE LANDS.

Sales.	Acres.
Sold at date of last report.....	12,598.24
Sold since date of last report.....	1,180.89
Total sold.....	13,779.13
Unapproved surveys.....	3,054.52
Total applied for.....	16,833.45

Under the provisions of the nineteenth section of the Act of April twenty-seventh, eighteen hundred and sixty-three, certificates have been issued to locators of lands which have since proved not to have been the property of the State. The amount so abandoned by the State is as follows:

Sixteenth and thirty-sixth sections, and lands taken in lieu thereof.....	29,160.00 acres.
Swamp and overflowed lands.....	15,138.26 acres.

It was stated in the last annual report that lists of the defaulting purchasers of swamp and overflowed lands in the Counties of Sacramento and Tulare, had been published, and those for the Counties of Yolo, Solano, and San Joaquin, entirely or nearly prepared for publication. These last were soon after also published, and in due time suits were brought against those who failed to make payment.

Copies of forty-five decrees of annulment of certificates of purchase have been filed by the District Attorney of Sacramento County, one hundred and twenty-three by the District Attorney of San Joaquin County, and two by the District Attorney of Yolo County. None have as yet been received from Tulare or Solano; but in these, as in the others, the effect of the publication has been to induce payments by many who had fallen in arrears. During the past year a second list has been published in Sacramento County, and also a list of purchasers of school and seminary lands who have failed to comply with the conditions of purchase. I would here renew the recommendation, that some method of giving notice to delinquents, involving less labor and expense, may be legalized.

I append hereto the statistical report, which, I regret to add, is as imperfect and unreliable as those of past years. In view of the value and importance of such tables when full and correct, I would recommend the passage of an Act allowing the sum of fifty dollars to each County Assessor, and to each Recorder in those counties where there is no Assessor, who shall make a satisfactory report of the statistics of his county, upon the blanks furnished by the Surveyor-General, to be paid

out of the General Fund, upon the certificate of the Surveyor-General that such report has been received. It would be well also if it could be provided that the Boards of Supervisors should withhold say twenty-five per cent of the compensation allowed the Assessors until the certificate of the Surveyor-General should be presented.

STATEMENT

Of the Expenditures of all Appropriations (other than salaries) for the Offices of the Surveyor-General and Register, from the 1st of November, 1864, to the 1st of November, 1865.

For what purposes Expended.	Amount.
Office rent.....	\$660 00
Postage and expressage.....	176 25
Binding books, and contingents.....	234 75
Purchase of maps, plats, etc..	262 75
	1,333 75

J. F. HOUGHTON,
Surveyor General and Register.

By A. S. BENDER, Deputy.

Subscribed and sworn before me, this fourth day of November, eighteen hundred and sixty-five.

SAMUEL CROSS,
Notary Public, Sacramento County, Cal.

[SEAL.]

STATISTICAL TABLES.

TABLE OF STATISTICS
Compiled from the Official Reports of County Assessors, for the Year 1865.

COUNTIES.	Acres of Land inclosed.....	Acres of Land cultivated.....	WHEAT.		BARLEY.	
			Acres.....	Bushels.....	Acres.....	Bushels.....
Alameda.....	.....	.....	.....	.....	.....	.....
Alpine.....	.....	.....	.....	.....	.....	.....
Amador.....	.....	.....	.....	.....	.....	.....
Butte.....	200,000	144,000	60,000	1,200,000	54,000	1,100,000
Calaveras.....	62,763	.....	.....	.....	3,357	.....
Colusa.....	107,770	48,770	10,000	15,000	26,530	705,900
Contra Costa.....	73,100	43,500	20,000	500,000	15,000	600,000
Del Norte.....	4,589	2,297	.....	.....	.....	.....
El Dorado.....	85,515	22,253	809	3,045	1,193	5,567
Fresno.....	.....	.....	.....	.....	.....	.....
Humboldt.....	22,261	9,060	635	20,409	240	9,232
Klamath.....	.....	.....	.....	.....	.....	.....
Lake.....	8,070	4,267	2,069	41,280	1,765	61,775
Lassen.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....
Marin.....	185,000	32,000	3,125	125,000	1,150	42,000

	5,000	3,000	250	5,000	400	8,000
Mariposa.....						
Mendocino.....						
Merced.....						
Mono.....						
Monterey.....	102,095	23,225	3,283	91,134	18,486	646,610
Napa.....	90,000	40,600	35,000	725,000	1,500	45,000
Nevada.....	14,600	19,100				
Placer.....	58,385	20,291				
Plumas.....	30,000	15,000	1,786	18,973	4,887	4,693
Sacramento.....	139,116	83,974	1,000	30,000		
San Bernardino.....	16,640	9,000	3,484	48,560	35,974	359,740
San Diego.....	4,500	3,000	2,600	34,000	3,000	6,000
San Francisco.....	18,000	1,779	600		1,000	
San Joaquin.....	232,660	151,413	40,320	927,360	123	
San Luis Obispo.....					90,473	2,442,771
San Mateo.....	140,000	45,000	12,000	240,000		360,000
Santa Barbara.....	15,300	5,116	1,250	4,833	12,090	11,166
Santa Clara.....	210,000	130,000	45,000	1,350,000	2,000	1,000,000
Santa Cruz.....	79,530	18,940	6,760	169,000	25,050	246,750
Shasta.....					7,500	
Sierra.....						
Siskiyou.....						
Solano.....	385,205	92,175	44,430	1,555,050	27,654	1,106,160
Sonoma.....						
Stanislaus.....	50,624	20,553	2,334	35,000	11,275	180,100
Sutter.....	107,850	45,171	11,124	222,408	27,907	697,675
Tehama.....						
Trinity.....	3,790	2,125	630	1,260	137	3,425
Tulare.....						
Tuolumne.....						
Yolo.....	128,220	36,815	3,100	6,200		
Yuba.....					18,100	633,500

TABLE OF STATISTICS—Continued.

COUNTIES.	OATS.		RYE.		CORN.		BUCKWHEAT.		PEAS.	
	Aeres.....	Bushels	Aeres.....	Bushels.....	Aeres	Bushels,	Aeres.....	Bushels.....	Aeres.....	Bushels.....
Alameda.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Alpine.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amador.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butte.....	1,000	3,600	200	8,000	500	12,000	.....	.....	.....	.....
Calaveras.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colusa.....	1,000	30,000	50	1,250	840	25,200	.....	.....	.....	.....
Contra Costa.....	1,950	97,500	.....	.....	20	600	.....	.....	.....	.....
Del Norte.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
El Dorado.....	5,275	620	14	56	20	1,600	.....	.....	.....	.....
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt.. ..	2,803	115,720	.....	.....	124	3,055	.....	.....	.....	.....
Klamath .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	398	16,900	17	.....	478	.....	.....	.....	.....	.....
Lassen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marin.....	5,120	220,000	.....	.....	20	400	.....	.....	.....	.....
Mariposa.....	200	4,000	.....	.....	100	1,000	.....	.....	20	.....

TABLE OF STATISTICS—Continued.

COUNTIES.	BEANS.		POTATOES.		SWEET POTATOES.		ONIONS.		HAY.	
	Acres.....	Bushels.....	Acres.....	Bushels.....	Acres.....	Bushels	Acres.....	Bushels.....	Acres.....	Tons.....
Alameda.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Alpine.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amador.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butte.....	.....	.....	50	5,050	.....	.....	20	2,000	30,000	36,000
Calaveras.....	.....	500	.....	.....	.....	.....	.....	.....	.....	2,284
Colusa.....	50	3,024	.....	3,000	.....	.....	.....	.....	10,000	15,000
Contra Costa.....	14	.....	50	.....	.....	.....	.....	.....	5,200	6,200
Del Norte.....	.....	70	.....	3,080	.....	.....	.....	.....	.....	.....
El Dorado.....	.....	.....	241	.....	.....	.....	.....	.....	7,168	7,094
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt.....	32,275	.....	470	87,094	.....	.....	.....	.....	932	2,014
Klamath.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	.....	.....	40	1,400	.....	.....	4	.....	1,201	3,603
Lassen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marin.....	30	800	2,000	200,000	.....	.....	.....	.....	1,900	3,800
Mariposa.....	.....	.....	100	5,000	.....	.....	50	3,000	600	1,000

TABLE OF STATISTICS—Continued.

COUNTIES.	Tons of Other Roots.....	Pounds of Cabbages.....	Acres of Sugar Cane.....	Pounds of Tomatoes.....	Acres of Broom Corn..	Pounds of Butter	Pounds of Cheese.....	Dozens of Eggs.....
Alameda
Alpine.....
Amador.....
Butte	20,000	.....	.....	.....	75,000	10,000	55,000
Calaveras.....
Colusa.....	150	25,000	.....	.....
Contra Costa.....	10,000	31	21,000	15,000	40,000
Del Norte.....
El Dorado.....	3,880	.....	2,000
Fresno
Humboldt.....	43,325	1,930	14,971
Klamath...
Lake.....	8	.....	.....	1,700	65,000	8,000
Lassen.....
Los Angeles.....
Marin	350,000	450,000	10,000
Mariposa.....	2,500	5,000	1,000

TABLE OF STATISTICS—Continued.

COUNTIES.	Wool—Pounds.....	Bee Hives—Number.	Honey—Pounds.....	HORTICULTURAL PRODUCTS—No. OF TREES AND VINES.				
				Apple.....	Peach	Pear	Plum	Cherry.....
Alameda.....								
Alpine.....								
Amador.....	250,000	500	5,000	52,000	225,000	10,000	5,289	2,300
Butte.....				25,422	21,162	3,984	1,996	962
Calaveras	162,963	575	11,500	18,750	35,325	2,840	1,530	2,560
Colusa.....	129,576	225	5,000	21,800	16,590	4,380	2,020	2,040
Contra Costa.....		60		3,000	200	3,000	700	1,000
Del Norte.....		503	500	91,395	52,205	13,927	5,791	1,506
El Dorado.....								
Fresno.....								
Humboldt.....	2,727	503	2,503	37,249	930	1,113	1,931	824
Klamath.....								
Lake.....		700		5,873	4,387	610	450	184
Lassen.....								
Los Angeles	30,000	90	4,000	21,000	5,000	1,525	900	300
Marin.....	5,000	100	1,200	800	2,000	500	1,500	200
Mariposa.....								

Mendocino.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merced.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mono.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Monterey.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Napa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nevada.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Placer.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plumas.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sacramento.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Bernardino.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Francisco.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Joaquin.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Luis Obispo.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Mateo.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Santa Barbara.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Santa Clara.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Santa Cruz.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shasta.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sierra.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Siskiyou.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Solano.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sonoma.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stanislaus.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sutter.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tehama.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trinity.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tulare.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuolumne.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yolo.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yuba.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	402,188	312	6,130	4,192	1,837	1,786	352	289	.....
	30,000	.....	12,000	32,250	26,200	6,950	6,675	5,450	.....
	.....	218	.....	.....	.....	.....	.....	.....	.....
	.....	300	4,500	29,229	30,745	10,561	2,674	1,217	.....
	.....	.....	.....	2,000	3,000	500	500	250	.....
	64,720	1,700	13,000	67,310	59,400	29,264	2,716	1,425	.....
	60,000	300	2,600	12,500	6,000	300	100	200	.....
	47,679	17	.....	188	2,774	611	5	21	.....
	.....	41	.....	.....	.....	.....	.....	.....	.....
	19,740	17,034	79,400	95,220	70,760	6,273	7,400	500	.....

	.....	.....	.....	20,000	5,900	6,000	3,000	2,000	.....
	162,000	100	1,400	14,000	4,550	4,000	225	750	.....
	175,000	.....	.....	120,000	35,000	39,000	3,000	4,500	.....
	3,000	.....	.....	39,380	4,271	4,860	2,300	1,200	.....

	224,802	.....	8,000	18,589	28,397	15,453	4,238	4,506	.....

	400,000	.....	2,000	3,145	4,876	700	400	150	.....
	76,516	1,500	30,000	16,540	26,076	2,986	1,281	354	.....

	.....	.....	.....	3,222	1,163	517	251	106	.....

	41,450	840	20,500	22,000	44,025	6,900	3,150	2,300	.....

TABLE OF STATISTICS—Continued.

COUNTIES.	HORTICULTURAL PRODUCTS—NUMBER OF TREES AND VINES—Continued.							
	Nectarine	Quince	Aprioot	Fig	Alloe	Citron	Lemon	Orange
Alameda .....	.....	.....	.....	.....	.....	.....	.....	.....
Alpine .....	.....	.....	.....	.....	.....	.....	.....	.....
Amador .....	.....	.....	.....	.....	.....	.....	.....	.....
Butte	7,000	700	7,170	2,200	.....	.....	201	89
Calaveras .....	.....	.....	997	.....	.....	.....	.....	.....
Colusa	1,530	150	890	225	.....	.....	.....	.....
Contra Costa	185	647	697	380	.....	.....	10	45
Del Norte .....	.....	100	75	.....	.....	.....	.....	.....
El Dorado	1,137	1,042	1,108	509	.....	.....	.....	6
Fresno .....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt .....	.....	159	3	25	.....	.....	.....	.....
Klamath .....	.....	.....	.....	.....	.....	.....	.....	.....
Lake	35	.....	171	12	.....	.....	.....	.....
Lassen .....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles .....	.....	.....	.....	.....	.....	.....	.....	.....
Marin	150	420	125	82	.....	.....	.....	.....
Mariposa	300	200	1,500	.....	.....	.....	.....	.....

TABLE OF STATISTICS—Continued.

HORTICULTURAL PRODUCTS—NUMBER OF TREES AND VINES—Continued.											
COUNTIES.	Pineapple.....	Prune.....	Persimmon.....	Pecan	Cherimoya	Almond.....	Walnut	Filbert.....	Gooseberry.....	Raspberry.....	Strawberry.....
Alameda.....
Alpine.....
Amador.....	184	.....	.....	3,020	3,500	700,000
Butte
Calaveras.....	350	50	.....	.....	.....	2,000
Colusa.....	149	590	.....	3,950	5,150	4,000
Contra Costa.....	45	.....	.....	.....	100	.....	.....	.....	.....	.....
Del Norte.....	5	.....	477	7	.....	430	.....	.....
El Dorado.....	25,000
Fresno.....
Humboldt.....	1	.....	4,939	15,576	34,597
Klamath.....
Lake.....	61	10	.....	372	793	685
Lassen.....
Los Angeles.....
Marin	65	.....	.....	.....	45	180	.....	1,000	800	9,000
Mariposa.....	1,500	1,500	3,000

TABLE OF STATISTICS—Continued.

COUNTIES.	HORTICULTURAL PRODUCTS—NUMBER OF TREES AND VINES—Continued.						LIVE STOCK.				
	Grapes	Tons of Grapes.....	Gallons of Wine.....	Gallons of Brandy.....	Value of Fruit.....	American Horses.....	Tame Spanish Horses....	Wild Spanish Horses.....	Total Number Horses.....	Mules	
Alameda .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Alpine.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amador	864,000	600	8,160	.....	.....	2,400	2,000	300	4,700	1,500	.....
Butte.....	367,981	.....	21,364	.....	.....	.....	.....	.....	1,987	239	.....
Calaveras	52,875	24	.....	.....	.....	1,551	1,590	2,179	5,320	1,002	.....
Colusa	150,000	.....	5,000	.....	\$50,000	.....	.....	.....	6,012	225	.....
Contra Costa.....	.....	.....	.....	.....	.....	150	50	.....	200	70	.....
Del Norte.....	.....	.....	.....	.....	.....	.....	.....	.....	3,138	664	.....
El Dorado.....	1,164,418	.....	83,063	.....	.....	.....	.....	.....	.....	.....	.....
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	457	.....
Humboldt.....	991	.....	400	.....	10,163	1,126	.....	3,076	.....	.....	.....
Klamath .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	6,342	.....	.....	.....	.....	600	500	800	1,900	97	.....
Lassen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marin.....	25,000	42	.....	.....	18,000	625	1,650	800	3,075	91	.....
Mariposa	100,000	.....	500	100	.....	300	400	300	1,000	350	.....

TABLE OF STATISTICS—Continued.

COUNTIES.	LIVE STOCK—Continued.								
	Asses.....	Cows.....	Calves.....	Stock Cattle.....	Beef Cattle.....	Oxen.....	Total Number of Cattle..	Sheep	Goats.....
Alameda .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Alpine.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amador.....	87	5,112	2,000	3,500	1,800	223	12,633	89,520	100
Butte.....	.....	.....	.....	.....	.....	.....	3,868	4,267	.....
Calaveras	6	1,200	750	9,464	.....	.....	11,551	54,321	250
Colusa	15	3,570	.....	5,743	.....	137	9,478	21,596	33
Contra Costa.....	.....	200	175	.....	500	165	1,045	200	100
Del Norte.....	.....	.....	.....	.....	.....	886	5,104	5,712	437
El Dorado.....	41	2,239	886	1,293	.....	.....	.....	.....	.....
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt.....	14	3,708	3,024	7,590	959	577	15,858	2,110	15
Klamath .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake	6	1,038	583	1,548	900	164	4,233	7,020	10
Lassen .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marin	8	7,500	.....	14,000	1,250	850	23,600	9,150	32
Mariposa.....	400	500	.....	2,000	2,500	500	5,000	4,000	1,000

TABLE OF STATISTICS—Continued.

COUNTIES.	LIVE STOCK—Continued.						STOCK SLAUGHTERED—Cattle.	
	Hogs	Chickens.....	Turkeys	Ducks	Geese.....	Guinea Fowls	Number.....	Value
Alameda .....	.....	.....	.....	.....	.....	.....	.....	.....
Alpine.....	.....	.....	.....	.....	.....	.....	.....	.....
Amador .....	.....	.....	.....	.....	.....	.....	.....	.....
Butte	20,160	47,000	21,000	50	45	.....	2,188	.....
Calaveras.....	1,763	.....	.....	.....	.....	.....	.....	.....
Colusa.....	6,582	.....	.....	.....	.....	.....	.....	.....
Contra Costa.....	13,235	11,781	71	45	120	.....	.....	.....
Del Norte.....	300	800	100	50	.....	.....	.....	.....
El Dorado.....	5,634	6,500	2,500	63	115	.....	.....	.....
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt.....	5,795	8,100	303	123	176	.....	.....	.....
Klamath.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake	2,945	16,000	1,000	600	298	.....	.....	.....
Lassen.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....	.....	.....
Marin.....	2,120	15,000	625	1,520	350	.....	625	.....
Mariposa.....	5,000	5,000	3,000	500	400	.....	3,000	.....

Mendocino.....	.....	8	60,000	8	.....	3,000,000	4,000,000	14	.....
Merced.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mono.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Monterey.....	.....	1	1,000	1	.....	.....	.....	.....	.....
Napa.....	8,000	1	.....	1	.....	1,750,000	.....	.....	.....
Nevada.....	.....	29	58,000	19	10	.....	.....	51	781,000
Placer.....	9,900	20	.....	10	10	10,700,000	.....	14	.....
Plumas.....	20,000	16	30,000	1	15	.....	.....	15	108,100
Sacramento.....	60,000	1	.....	.....	.....	600,000	.....	1	.....
San Bernardino.....	9,000	2	5,000	2	.....	420,000	100,000	2	250
San Diego.....	.....	.....	.....	.....	.....	.....	.....	1	1,500
San Francisco.....	.....	5	.....	5	.....	6,250,000	.....	1	.....
San Joaquin.....	.....	1	4,000	.....	.....	.....	.....	.....	.....
San Luis Obispo.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Mateo.....	4,000	7	.....	6	1	3,500,000	1,400,000	.....	.....
Santa Barbara.....	1,500	.....	.....	.....	.....	.....	.....	.....	.....
Santa Clara.....	40,500	10	22,000	3	7	.....	.....	.....	.....
Santa Cruz.....	25,000	17	110,000	8	9	10,500,000	.....	.....	.....
Shasta.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sierra.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Siskiyou.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Solano.....	2,000	.....	.....	.....	.....	.....	.....	.....	.....
Sonoma.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stanislaus.....	15,000	.....	.....	.....	.....	.....	.....	.....	.....
Sutter.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tehama.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trinity.....	1,600	.....	.....	.....	.....	2,700,000	.....	.....	.....
Tulare.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuolumne.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yolo.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yuba.....	5,000	15	.....	11	4	27,000,000	.....	5	15,000

TABLE OF STATISTICS—Continued.

COUNTIES.	IMPROVEMENTS—Continued.									
	TURNPIKE ROADS.					RAILROADS.				
	Number	Number of miles in length.....	Cost.....	Income.....	Cost of Repairs...	Number	Miles in length...	Cost.....	Capital Stock of incorporated Companies working in each County.....	
Alameda.....	.....	.....	.....	.....	.....	.....	.....	.....
Alpine.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amador.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butte.....	2	85	\$60,000	.....	.....	1	13	.....	.....	\$500,000
Calaveras.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colusa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Contra Costa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Del Norte.....	1	50	30,000	.....	.....	.....	.....	.....	.....	.....
El Dorado.....	13	99	.....	.....	.....	1	16½	.....	.....	.....
Fresno.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Klamath.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	1	20	10,000	.....	.....	1	2½	\$20,000	.....	.....
Lassen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marin.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mariposa.....	3	50	35,000	.....	\$1,500	.....	.....	.....	.....	.....

TABLE OF STATISTICS—Continued.

COUNTIES.	ASSESSED VALUE OF PROPERTY.				COMPARATIVE VALUE.		
	Real Estate.	Improvements.	Personal Property	Total valuation of Property.	Total valuation as per Report of 1864.	Increase.	Decrease.
Alameda†	.....	.....	.....	\$5,107,131	\$5,200,000	.....	\$92,869
Alpine†	.....	.....	.....	445,057	498,574	.....	53,517
Amador†	.....	.....	.....	1,903,251	2,328,235	.....	424,984
Butte.....	\$1,207,708	.....	\$1,358,916	2,566,624	3,233,768	.....	667,144
Calaveras	.....	.....	1,018,754	2,006,786	2,202,050	.....	195,264
Colusa	456,504	\$243,668	763,224	1,463,476	1,545,825	.....	82,349
Contra Costa.....	1,384,466	.....	787,730	2,172,196	1,922,708	\$249,488	.....
Del Norte.....	57,195	98,455	173,560	329,210	341,285	121,158	.....
El Dorado.....	331,325	1,714,337	1,595,033	3,640,895	3,519,737	183,675	.....
Fresno†	.....	.....	.....	911,715	1,105,075	313,071	.....
Humboldt.....	385,756	281,030	751,360	1,418,146	267,460	94,303	.....
Klamath†	.....	.....	.....	361,763	310,216	14,952	.....
Lake	51,560	64,868	208,740	325,168	672,325	.....	.....
Lassen†	.....	.....	.....	639,741	2,109,000	.....	32,584
Los Angeles.....	.....	.....	.....	1,905,380	1,815,334	130,916	203,620
Marin	1,125,000	.....	821,250	1,946,250	1,644,384	.....	.....
Mariposa.....	1,232,370	.....	.....	1,237,370	1,393,589	.....	407,014
Mendocino†	.....	.....	.....	1,161,773	731,061	.....	231,816
Merced†	.....	.....	.....	816,318	135,874	85,257	.....
Monot	.....	.....	.....	131,876	1,134,845	.....	3,998
Monterey	464,162	147,058	454,064	1,065,284	2,533,446	308,245	69,561
Napa.....	1,814,866	.....	901,825	2,841,691	4,059,463	.....	.....
Nevada	2,269,714	.....	1,731,699	4,001,413	.....	.....	58,050

Placer.....	389,640	645,071	1,529,268	3,000,000	2,851,870	148,130	.....
Plumas.....	483,545	.....	602,389	1,085,934	965,934	120,000	.....
Sacramento.....	5,244,850	876,300	4,002,675	10,923,825*	11,389,808	465,983	.....
San Bernardino.....	100,000	180,000	140,000	420,000	370,788	49,212	.....
San Diego†.....	.....	.....	.....	433,703	518,629	84,926	.....
San Francisco.....	49,131,712	.....	39,129,145	88,266,457	82,403,488	5,862,969	.....
San Joaquin.....	1,634,086	1,167,931	1,653,041	4,455,058	4,985,565	530,507	.....
San Luis Obispo†.....	.....	.....	.....	380,396	545,210	164,814	.....
San Mateo.....	1,128,738	.....	132,323	1,261,063	2,675,180	1,414,117	.....
Santa Barbara†.....	.....	.....	.....	850,589	540,000	.....	.....
Santa Clara.....	2,811,430	1,945,530	2,038,410	6,795,370	6,340,560	310,589	.....
Santa Cruz†.....	.....	.....	.....	1,284,279	1,158,672	454,810	.....
Shasta†.....	.....	.....	.....	1,008,946	1,084,293	125,607	.....
Sierra†.....	.....	.....	.....	2,295,518	2,097,875	.....	75,347
Siskiyou†.....	.....	.....	.....	1,590,391	1,476,124	197,643	.....
Solano.....	1,542,120	.....	1,218,369	2,760,489	3,215,832	114,267	.....
Sonoma†.....	.....	.....	.....	4,728,776	3,960,905	767,871	.....
Stanislaus.....	405,304	5,528	477,587	888,419	824,152	64,267	.....
Sutter†.....	.....	.....	.....	1,500,000	1,939,594	439,594	.....
Tehama†.....	.....	.....	.....	950,589	1,506,453	555,864	.....
Trinity†.....	.....	.....	.....	683,000	673,344	9,656	.....
Tulare†.....	.....	.....	.....	1,085,982	1,306,380	220,398	.....
Tuolumne†.....	.....	.....	.....	1,536,258	908,087	628,171	.....
Yolo†.....	.....	.....	.....	2,135,637	2,204,487	68,850	.....
Yuba.....	715,500	1,430,000	2,500,000	4,645,500	4,310,364	335,136	.....
Totals.....	.....	.....	.....	\$183,364,693	\$179,685,888	\$10,689,393	\$7,010,588
	.....	.....	.....	179,685,888	.....	7,010,588	.....
Total increase.....	.....	.....	.....	\$3,678,805	.....	\$3,678,805	.....

* No report received. Including supplemental assessment as shown by Controller's report.

† No report received. From report of eighteen hundred and sixty-three.

APPENDIX.

REPORTS OF COUNTY ASSESSORS.

COLUSA COUNTY.

E. McDANIEL.....County Assessor.

COLUSA, Colusa County, }
September 16th, 1865. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—Inclosed please find my statistical report of this county for the year eighteen hundred and sixty-five. There has been some falling off in the number of cattle, hogs, and sheep, on account of the scarcity of grass and the total failure of the crops last year, and they have not been brought back.

The statement I made last year in regard to the great natural agricultural advantages of this county, it is unnecessary to repeat, as the remarks then made, particularly in regard to the character and quality of the soil, would now equally apply. The soil of a great portion of this county is probably as rich in all the essential elements necessary for the production of certain crops as that of any other county in the State. We need more improvement in the cultivation of the soil. I alluded in last year's report to the great necessity of irrigating ditches. Wherever this system has been tried it works well. There are some small ditches in the county that proved their utility this last year by giving at least ten bushels of grain more to the acre than other land in the same field, equally as good, that had the same kind of ploughing. The soil of this county is mostly adapted to wheat, barley, oats, and corn. There are but very few vegetables raised in this county—scarcely enough for home consumption. My last year's report in regard to timber and its location is applicable this year.

An oil district has been located in this county. Those acquainted with petroleum think the prospect very good. There are several wells under way. Some have got down one hundred and fifty feet, and say the prospect is good.

The grain crop in this county was only tolerable, although we have plenty in comparison with last year. The hay crop was very good. There was not more than half a crop of fruit.

Yours respectfully,

E. McDANIEL,
County Assessor of Colusa County.

CALAVERAS COUNTY.

WILLIAM J. DAKIN.....County Clerk.

CLERK'S OFFICE, Calaveras County,
Mokelumne Hill, November 7th, 1865. }

Hon. J. F. HOUGHTON,
Surveyor-General :

SIR :—Herewith I send statistical report, as compiled from the lists of Township Assessors, as the same remain on file in this office. The report is not as complete as it should be, but embraces all statistics shown by said lists, which is the only guide we have in making up the report. We received blanks from your office in early spring, which were promptly delivered to the Assessors, at the same time reminding them of their duty in the matter, and not one of them has made any return to this office, except such as appears upon the lists—all of which has been carefully copied into the inclosed report.

Truly yours,

WILLIAM J. DAKIN,
Clerk of Calaveras County.

BUTTE COUNTY.

J. BEAN.....County Assessor.

COUNTY ASSESSOR'S OFFICE,
Oroville, September 11th, 1865. }

Hon. J. F. HOUGHTON,
Surveyor-General :

SIR :—I herewith inclose statement of the agricultural and other statistics of Butte County, compiled from the assessment books for the year eighteen hundred and sixty-five, as also an abstract of the assessed value of real and personal property, with the amount of taxes for State and county purposes levied thereon.

There has been an increase in the various productions of the county

over last year, the principal productions being wheat, barley, and hay. In stock there has been a decrease of about one third, owing to a law passed by the last Legislature, known as the fence law, which has compelled farmers owning small lots of stock, to remove them to the mountains and other counties where such laws do not exist.

By way of improvements, we have twenty-six miles of railroad, and the cars making their regular trips to and from Marysville. We also have about one hundred miles of turnpike, to wit: the Woodville, Dogtown, and Chico Roads, which have been built in the last year, at a cost of over sixty thousand dollars.

The special attention given to the tillage of orchards and vineyards throughout the county, is apparent from the quantity and excellent quality produced.

The grape production and wine making interest of the county are rapidly growing in importance, and in a year or two will be paramount to the culture of all other kinds of fruit. The cultivation of the grape and the manufacture of wine are alike understood, and the pursuit will soon lead to a large and constantly increasing revenue from that source.

Bees have done very poorly for the last two years. Instead of doubling or trebling their number, there are but few more hives in the county than last year. The seasons have been peculiarly unpropitious for this indefatigably industrious insect, the more than ordinary length of the dry season militating greatly against them, in procuring the desired nectar from the vegetable kingdom.

The statement made in former reports in regard to the natural agricultural advantages of the county, is unnecessary to repeat, as the remarks then made, particularly in regard to the character and quality of the soil, would now equally apply. The soil of this county is probably as rich in all the essential elements necessary for the production of crops as any in the State. More attention is given to improved methods of cultivating the soil, and all the agricultural implements of modern invention and improvement are coming generally into use. Deep ploughing is approved and generally practiced by the farmers. Husbandmen generally approve the practice of planting their crops on fallow land. This method of cultivating facilitates the early sowing of seed, extending to the crops all the benefits afforded by time before the dry weather of early summer sets in. The agricultural productions of the county mainly consists in wheat, barley, and corn.

Since the last report, I am happy to be able to state that improvements are progressive, and of a permanent nature. We can boast of some as good roads as any in the mountains, and bridges and ferries are now in good order for travel.

A manifest improvement is discernible in the interest taken by our citizens in public schools, since the last report. Our population is becoming more settled, and the number of children increasing, and our School Fund, judiciously managed, will give a good ratio to each scholar.

The assessment this year is two million five hundred and sixty-six thousand six hundred and twenty four dollars, being over five hundred thousand dollars less than last year. This is caused by the fence law compelling owners of stock to take it out of the county.

Of electro magnetic telegraph in this county, we have but one, valued at about twenty-five hundred dollars; length, fifty-four miles.

I am, sir, yours, very respectfully,

J. BEAN,
Assessor Butte County.

SAN DIEGO COUNTY.

JOHN L. McINTIER.....County Assessor.

ASSESSOR'S OFFICE, San Diego County, }
October 6th, 1865. }Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In compliance with the law, I herewith beg to transmit to your office my annual report of statistics, etc., of San Diego County.

Boundaries: north by Los Angeles and San Bernardino Counties, east by the State line and Mexican boundary, south by Lower California, and west by the Pacific ocean.

The land of this county, with few exceptions, is generally adapted to grazing purposes. There are a few intervening valleys of excellent agricultural land, which, so far as cultivated, have produced equal to any land in the State. The low prices which agricultural products now command, and the distance of the county from the principal markets, have had a tendency to retard agricultural pursuits, and much land that might be advantageously cultivated is now left for the free use of stock. The interior or mountainous district of the county is generally well timbered, chiefly oak. In the neighborhood of San Isabel are fine pineries, sufficient to supply for many years all the timber that may be required for building or for purposes of internal improvement.

In regard to the articles of butter, cheese, eggs, chickens, etc., I found it impossible to collect any correct information, as but few, if any, farmers keep account of the amount they sell or the average price of the same.

The accompanying schedule shows the various agricultural products of the county; also its fruit trees and vines, live stock, etc., on examining which it will be seen that there is a considerable falling off in some instances from last year.

I remain your obedient servant,

JOHN L. McINTIER,
Assessor of San Diego County.

SANTA CRUZ COUNTY.

N. TAYLOR.....County Assessor.

SANTA CRUZ, September 22d, 1865.

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In compliance with the law, I herewith send you the statistics of this county. I have estimated the products of the county for this year, and think it as nearly correct as by taking the amount from last year.

Besides the saw and grist mills which you find in the report, there are several shingle and lath machines that turn out large quantities.

The California Powder Works manufacture on an average four thousand kegs, of twenty-five pounds each, per month. More could be, and sometimes is, made, but take the season through this is about the average.

The San Lorenzo Paper Company has a capacity for manufacturing more, but the following is about the average per month: Eighteen hundred reams straw wrapping paper, twenty-four thousand pounds printing paper, besides other kinds.

Our tanneries manufacture some sixty thousand pounds of leather per month.

Our limekilns turn out some seven thousand or eight thousand barrels per month.

The Petroleum Company has ceased to make oil by retorting, and have commenced boring for oil, with what success I am unable to state. I saw a steam engine going up to the works a few days since, and concluded they meant to prosecute the work more vigorously. We may hope by another season to report largely on oil.

All of which is respectfully submitted.

N. TAYLOR,
Assessor of Santa Cruz County.

SAN JOAQUIN COUNTY.

W. B. STAMPER.....County Assessor.

COUNTY ASSESSOR'S OFFICE, San Joaquin County, }
Stockton, October 27th, 1865. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In compliance with the duties of my office, I have the honor to submit the following report, the details of which will be understood by reference to the statistical table accompanying.

It will be discovered, by comparing the table of this year with those of the preceding, that there is cause for congratulation in the plainly demonstrated recuperative energy which the county exhibits, especially in the agricultural and farming interests. The strong contrast between the fruitful and favorable season which has just rewarded the farmer and the season of last year, which left him so hardly smitten by drought, is plainly seen in the figures which I have this year the pleasure of laying before you.

It will be seen that there is less land this year under cultivation in this county than there was during the last, if we exclude from that head the few thousand acres which have been devoted to pasturage, of which there was none in the tables of eighteen hundred and sixty-four; and yet, notwithstanding this fact, the yield in produce, when compared with the preceding year, seems to present the cheering evidence that,

so far as the necessities of life are concerned, one abundant harvest will compensate for the poverty of two lean years. About one fifth less land was sown in wheat this year than last year, and the product is nearly eight times as large, as for instance :

In the year eighteen hundred and sixty-four, fifty-three thousand and sixteen acrés produced one hundred and ten thousand two hundred and sixty-nine bushels of grain, and in eighteen hundred and sixty-five, forty-three thousand three hundred and twenty acres produced nine hundred and twenty-seven thousand three hundred and sixty bushels of grain.

The barley crop exhibits the same gratifying result, and adds additional evidence to show how quickly the prosperous seasons, under our genial skies, can repair the disasters of a drought.

In the year eighteen hundred and sixty-four, eighty thousand nine hundred and ninety-three acres produced one hundred and sixty-six thousand six hundred and twenty-three bushels of grain; in the year eighteen hundred and sixty-five, ninety thousand four hundred and seventy-three acres produced two million four hundred and forty-two thousand seven hundred and seventy-one bushels of grain; and by further comparison the extremes are of attractive interest—for the average yield of wheat per acre, in eighteen hundred and sixty-four, appears to have been about two bushels, while in eighteen hundred and sixty-five, it is some twenty-one and a half bushels. The same parallel, of course, is apparent in the barley crop; for while in eighteen hundred and sixty-four the average of bushels per acre is found to be about two bushels, in eighteen hundred and sixty-five it has risen to some twenty-seven. I have thought it proper to direct your attention to these particulars, in view of the chief object contemplated by the system which imposes this certain duty upon the County Assessors as your auxiliaries, and have taken the chief agricultural staples for the purposes of illustration.

The returns show that the culture of cotton and tobacco, the experimental attempts in the raising of which have been watched with interested pride, have been abandoned for the present in this district. This may not be a conclusive result of the experiment, but can be attributed to the probable fact that the farmers have thought it prudent to devote themselves to the chief objects for this year, and reserve their experiments for a time when the pinch of the drought shall be forgotten.

Grape growing has been attended with success, the vintage of this year showing a prosperous and healthy condition of the vineyards. This branch of agricultural industry has been steadily improving and growing in favor, and already the exports of grapes from this county, together with the wines made, give the highest promise of excellence which will be attained in this particular in this valley.

The number of stock, both horses and cattle, has diminished. This may be credited to the influences of the former year, when the stock-owners were forced to seek other fields for pasturage, and the deficiency thus caused has not been supplied.

The subject of irrigation, on some large and systematic plan, is of vital importance to this section of the country. As yet, no one of enlarged views of public policy has thought it a matter of sufficient importance to invent and propose a practicable plan, by which the great grain growing fields, which lay between the rivers, can be measurably protected, by artificial supply, against the dangers of dry seasons. Except in one instance, there is no section in this county protected on a large scale, and that is owing to individual enterprise rather than any

combined effort of farmers: it is where the dykes of the Calaveras River, constructed for the purpose of keeping that river within its banks, have also the advantage of being so arranged that when the occasion requires they can be made useful for irrigating much of the land contiguous.

I have nothing to report in regard to internal improvements existing, although several lines of railroad and turnpikes, greatly needed, have been much discussed, anxiously expected, and patiently waited for; there is some reason to believe from the liberal subscription made by this county, and the fact that a corps of surveyors, apparently engaged in defining a route for a railroad, were seen during the summer in this section, that there will be a railroad in this part of the valley.

All of which, I have the honor to submit for your consideration.

W. B. STAMPER,
County Assessor of San Joaquin County, Cal.

DEL NORTE COUNTY.

GEORGE W. RUSSELL.....County Assessor.

COUNTY ASSESSOR'S OFFICE,
Crescent City, October 16th, 1865. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—Herewith you will find my report as County Assessor for the year eighteen hundred and sixty-five. I have given such items only as can be depended upon as correct.

The farming land of this county is confined to two valleys. The land cannot be excelled by any in the State, and always gives a large return to the farmer for his labor. In regard to fruit—apple, pear, cherry, and plum trees yield in abundance. We have a vast forest of timber running through our county—redwood, fir, hemlock, spruce, and pine, abound in great abundance. Our copper mines have lain idle this summer, with but one or two exceptions, all for the want of “the needful” to continue them.

Respectfully, yours,

GEORGE W. RUSSELL,
Assessor of Del Norte County.

LAKE COUNTY.

NICHOLAS PHELAN.....County Assessor.

LAKE COUNTY, October, 1865.

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—I had concluded that it was not required to send you the statistical reports this year, as the Secretary of the State Agricultural Society

requested me as a favor to collect them and send them to him, which I have already done.

I have one thing to mention in regard to the prosperity of this county, that on account of the severity of last winter, great numbers of cattle, hogs, and sheep died from starvation—nearly one third, if not more—which reduces the valuation of personal property this year some forty thousand dollars. There is not much difference in the improvements and real estate. These statistics are correct. I took considerable pains to get them correct. Hoping this explanation will meet your approbation, I remain,

Yours, with respect,

NICHOLAS PHELAN,
County Assessor.

MARIPOSA COUNTY.

A. C. KELLY.....County Assessor.

OFFICE OF COUNTY ASSESSOR,
Mariposa, October 28th, 1865. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—In conformity with the law, I submit my annual report for the year eighteen hundred and sixty-five, which is as full and correct as I have been able to ascertain by careful investigation.

I am pleased to state that there has been an increase in the productions of the county over last year. A favorable season has enabled our farmers and stock raisers to retrieve in a great measure the losses sustained the year previous.

Owing to the fact that a great portion of the placer mines of our county have been worked out, miners have turned their attention to quartz mining and prospecting, the result of which is the discovery and development of gold-bearing quartz veins hitherto unknown.

Copper mining is also attracting considerable attention. In what is known as the Hamilton District, in the southern portion of the county, smelting furnaces have been erected, and from tests of ore from the different veins in the locality, the district promises to be as rich in copper as any in the State. In Hunter's Valley, in the northeast part of the county, there have been found rich veins of copper ore. In this district is located the celebrated La Victorie mine, which in richness surpasses any in the county.

Many improvements of a permanent nature have been made during the past year, and our county gives evidence of prosperity that cannot fail to be gratifying.

Very respectfully, your obedient servant,

A. C. KELLY,
Assessor of Mariposa County.

MONTEREY COUNTY.

W. P. McGARVEY.....County Assessor.

ASSESSOR'S OFFICE, Monterey County, }
 Monterey, September 12th, 1865. }

Hon. J. F. HOUGHTON,
 Surveyor-General :

SIR:—I herewith transmit to you my statistical report for the present year, as compiled from the original lists made at the time when taking the assessments, and from all such information as I could collect and deemed most reliable. In gathering such information I have used all possible diligence, and employed as much time as my official duties would permit, in order to give a statement of the actual resources of this county as correct as possible.

I have not set down in the aforesaid report the agricultural products of last year, the crops, with a few exceptions, having proved a complete failure; and having finished my canvas for the present year before the various products were matured or gathered, I can give but the estimate of them, which estimate, made according to the judgment of persons most apt to discern in the matter, I believe very near exact.

The crops generally were promising, especially those early put in. Late crops did not do so well on account of want of late rains.

As may be seen by the account of the surviving stock and beef cattle, the two years' drought has been severe to them. Of seventy thousand head existing a few years ago, only thirteen thousand are left; and if those are remaining it is owing to the great slaughter made during the last two years for hides and tallow, or even for the hides alone, leaving thus a chance to the remainder of getting through. The surviving stock are mostly all young cattle, two and three years old. But few calves of last year escaped, the greater part having been killed to save the cows.

Sheep have likewise suffered considerably; the loss of them from August, eighteen hundred and sixty-four, to March, eighteen hundred and sixty-five, may be estimated at seventy-five thousand. The greater part of last year's lambs had to be killed. The clip of wool has this year been rather below the average.

Horses have generally held out better than other stock, but they have not escaped without great loss.

This year there is abundance of pasture—a great deal more than the surviving stock can consume. The appearance of the country, mountains, and valleys, presents a great contrast with the desolate aspect of last year. Cattle are not expected to get poor next winter unless from exposure.

Mining has for the present been abandoned in this county. The Burri-Burri Copper Mine alone is in active operation, but until now I have not been able to ascertain the result obtained.

A short time ago a discovery was made in the vicinity of Peach Tree Valley, about seventy-two miles distant from Monterey City, of a substance having all the appearance of coal; it is shining, the grains run horizontally and the layers are thin. It is rather brittle; but whether coal or crystalized asphaltum has not yet been determined. Opinions

differ about it; trials have been made in several forges with indifferent result. It must be remarked that the specimen brought for examination was said to have been taken from the surface. Should it, nevertheless, prove to be coal, there will be a drawback in the great distance from its locality to a place of shipment or market.

Submitting the foregoing,

I remain, very respectfully, your obedient servant,

W. P. McGARVEY,
Assessor Monterey County.

By J. KUNREZ, Deputy.

NAPA COUNTY.

B. W. ARNOLD.....County Assessor.

ASSESSOR'S OFFICE, Napa County, }
September 13th, 1865. }

Hon. J. F. HOUGHTON,
Surveyor-General:

SIR:—Herewith I send the statistics of this county. They are not as complete as I could wish, but are as near as I can well make them from the assessment roll at present. There are several items I have left blank on the return, among which are poultry, butter, eggs, and some other things which it is impossible to make anything like a correct estimate.

Yours respectfully,

B. W. ARNOLD,
Assessor Napa County.

SAN FRANCISCO COUNTY.

Supplemental for 1865.

Salt mills.....	1
• Tons of salt ground annually	1,500
Rice mills.....	1
Woollen mills.....	2
Men employed, (White, 270; Chinese, 200)	470
Breweries	21
Barrels annually.....	61,825
Men employed.....	130
Sugar refineries.....	2
Men employed.....	180
Pounds annual capacity.....	25,000,000
Foundries, machine shops, and boiler makers	38
Men employed.....	1,200

Rope walk	1
Men employed	50
Soap factories.....	13
Consuming of tallow, lbs.....	750,000
Pounds of soap manufactured, about.....	1,000,009
Men employed.....	39
Match factory.....	1
Wire rope factory.....	1
Glass factory	1
Newspapers—	
Daily.....	11
Weekly	23
Semi-weekly.....	2
Tri-monthly.....	1
Tri-weekly.....	1
	<hr/>
	38

PLUMAS COUNTY.

A. D. HALLSTED.....County Assessor.

QUINCY, September 29th, 1865.

HON. J. F. HOUGHTON,
Surveyor General:

SIR:—I herewith transmit to your office my annual report as Assessor of Plumas County, accompanying which, please find statistical report of all such matters pertaining thereto as are possible to be attained with any degree of correctness

The taxable property of this county, for the present year, is as follows:

Description.	Value.
Personal Property.....	\$602,389
Real Property.....	483,545
Total.....	<hr/> \$1,085,934

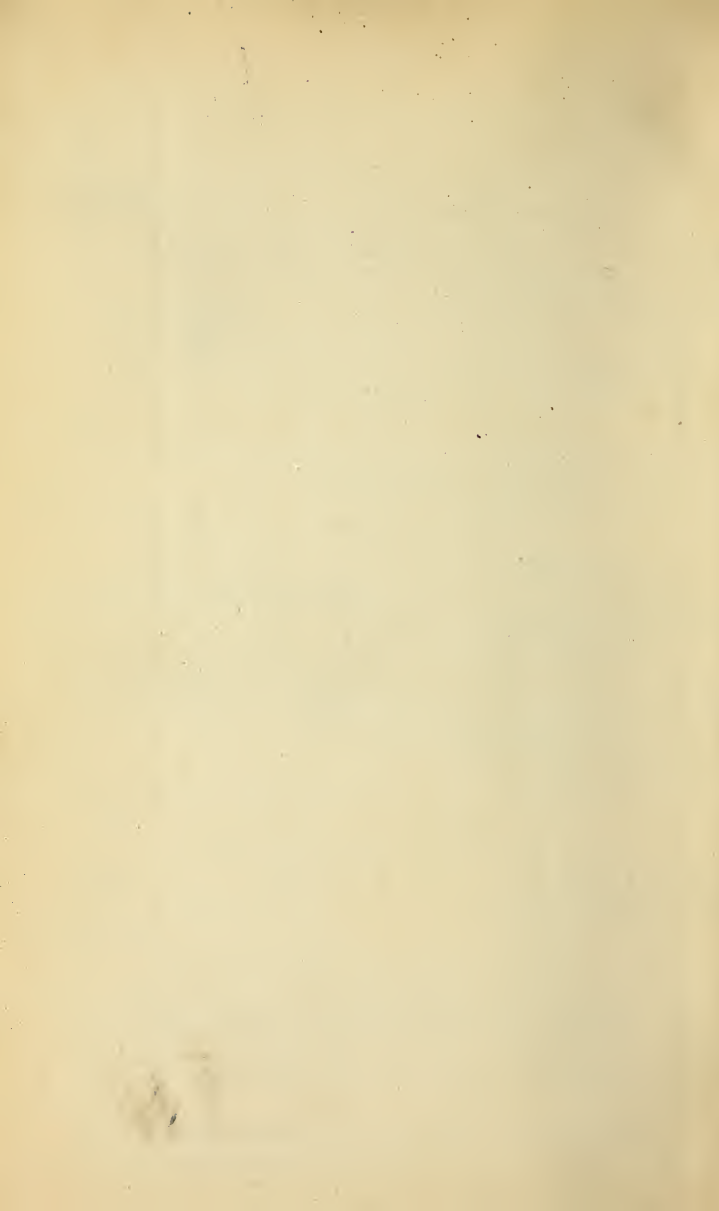
Increase over last year, one hundred and twenty thousand dollars.

It is impossible to give, with any degree of certainty, any report in regard to the mining productiveness of this county. In addition to our placer and quartz mines, we have recently discovered veins of copper ore that bid fair to be of great extent and of vast richness.

Hoping this will be sufficient,

I remain, respectfully, your obedient servant,

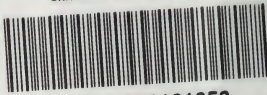
A. D. HALLSTED,
Assessor Plumas County.







UNIVERSITY OF ILLINOIS-URBANA



3 0112 078131353